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ABSTRACT

This book is a summary of the knowledge gained during 10 years experience as teacher, principal, superintendent, and consultant. It attempts to express as enthusiastically as possible why schools must change, what changes must be made, and how they might best be accomplished by teachers, administrators, school boards, and parents in every state in America to eliminate obsolete and inferior programs. Although more than 63 innovations are briefly described, no attempt is made to provide a detailed blueprint for change, as the actual procedures vary from school to school and can easily be learned by creative staff members. The main body of the book is organized into chapters built around eight steps which can be followed in changing a school and illustrations are given for implementing change in each of the six components of a school. Eleven appendixes provide supplementary statements and suggestions about change: 1) summary; 2) outsiders' view of Wilson School, Mankato State College; 3) an example of how to start; 4) using teacher aides; 5) some educators to know; 6) schools to discuss; 7) a list of some of the organized groups supporting change in education; 8) interesting curriculum projects; 9) a bibliography on change; 10) currently needed literature on topics which are constantly requested; and 11) a series of supplementary statements about the Wilson School Program in April 1970. (ED 039 926 is a related document.) (MBM)

Appendix 6

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IMPLEMENTING
DIFFERENT AND BETTER
SCHOOLS

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Introduction to the second printing
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A PLEA FOR HELP AND UNDERSTANDING

Many changes have occurred at the Wilson School since Chapter B in this book was originally written; further, a number of evaluations of the first edition of the book have been received, ranging on the continuum from extremely positive to extremely negative. The positives feel that the book spells out in simple language why schools must change, and that it offers many specific procedures for initially undertaking change projects, and for building ongoing innovations into a school program. The negatives say that it is not specific enough--not enough cookbook recipes--that it is more of the same old theory--that it should have a more durable cover.

We had planned to do a complete revision for the second printing, but the original sold so rapidly that there has not been time. We are certainly gratified to see the trememdous interest developing nationally in implementing different and better schools. We are sorry that a complete revision with a hard cover and more recipes is not possible at this time. But because of the developments at Wilson this spring, a number of consulting trips, and the new Indian education project, the revision will have to wait.

However, we have attempted a few improvements. A supplement explaining the current Wilson program has been added to the appendices, as well as some specific statements of beliefs. Even though there is some repetition, it is important for the reader to grasp, because it shows again that each school must devise *its own plan for change*, and that *innovation must become an ongoing cycle*.

In the supplement, the reader can see that the current Wilson emphasis has switched to that of a humane school, with emphasis on the teacher-pupil match as the priority item. Closely allied to this is the agreement that the affective and psychomotor domains are more important overall than the cognitive, though any one of the three might be the most important area for any particular person at a given moment in time. For example, the affective might be cured by a dose of the cognitive although more often the old "academics"--reading and math--are the ones needing to be dropped from the student's program--at least temporarily. Of course, the interrelationship of the three for each individual is obvious. The work in this area by the Progressive Education Association in the 1930's and reported by Smith and Tyler in *Appraising and Recording Pupil Progress*, published in 1942 by *Harper Brothers, illustrates this concept.*

A further development is the concern over creativity and individual learning styles. Though discussed in the literature for years, the Wilson staff is now making efforts to implement practical applications in these areas. Unfortunately, more dropouts have occurred among the creative than probably any other group; learning styles are seldom a topic among school staffs.

Wilson's 14 points have been included as another statement of clarification, as well as to illustrate the evolving decision making process. The latest attempts at Wilson to interrelate disciplines is included, realizing that this approach is not the ultimate. To aid the requests for more cookbook recipes, an outline of building a daily smorgasbord schedule has been written. Pilot reports on other projects conclude the summary to again emphasize that change means ongoing involvement.

Wilson is not the best--it lacks quality, it is too small, it has not been in operation long enough, and it needs help from teacher education. But it is trying. Mankato State is now attempting to start a new teacher education program whereby future teachers will have a completely new approach; for example, they might only study two areas in education; learning about learning, and how to individualize. These could be interwoven with extensive internships with people--particularly ages 0-18--in all kinds of situations, plus programs in human relationships, cognitive areas, and interrelationships of curriculum. Any instruction would be taught the way we expect teachers to teach. We are not yet sure whether a new program will be offered immediately, but again Wilson is involved trying to reform another phase of education.

This book is not intended to provide a "model" or "the answers." If the National Institute for Education is passed in Congress, this new research arm may provide some of "the answers." In the meantime, guidelines are presented here, such as are represented by the eight chapter titles which form the recycling process of change. The major purpose of this book is to challenge present thinking and practices in education, to provide some new ideas, and to help North Americans get further involved in the struggle of how to achieve the much needed revision in education. If it does not do these things, then it has failed. But if it does, then this book will have contributed to the growing literature on change. Hopefully others will soon help by writing some of the "cookbooks" that are needed to shortcut change and improve current innovative attempts. Too many errors are still being made by schools trying to innovate with too little creativity and boldness. Thus this author offers a plea to those with some of the answers--write booklets on topics such as are suggested on page 214. Unless one does nothing but write, it is too much for one practicing school administrator, or even several authors to accomplish. We need your help.

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Chapter A

dedication

-- To those educators who dare to dream --

In 1943, Dr. Fred G. Bratton wrote The Legacy of the Liberal Spirit, one of the truly outstanding interpretations of freedom and liberalism. He felt the volume came under the category of "necessary," for in it he attempted to describe the spirit for which the allied nations were at that moment fighting to defend; he sought to interpret the history of freedom in its most critical stages.

Today America faces further crises--in its total society, and in the schools of that society. Though these crises are perhaps not as crucial as defeat would have been in World War II, nevertheless, issues for which we must seek answers. The present schoolhouse in America needs to go the way of the dinosaur; it is well into the period of obsolescence. But boys and girls still have a need for something we call education. It is in this spirit that this book is justified as necessary--it is an attempt to evolve a replacement for the dinosaur--to develop a school program--whether conducted within the traditional school walls, or in another facility or area of the community--that truly is significantly different and significantly better.

Schools are not the only part of our society calling for change. In the past few years, America has witnessed many individual and national tragedies. We have been sorrowed by the deaths of our troops in Vietnam, by accidental tragedies in our everyday living, and by the shocking assassinations of men like John Kennedy, Martin King, and Robert Kennedy.

Each of these men, as have others before them, had a dream; they dreamed of a better world, of a better life for those in need, and of a better nation for us all. True, they gained personal recognition and power, but this was not their driving force; in no way can their personal gains balance the sacrifices to their families and to themselves as they attempted to lead us to a better society.

Their Ideals, their Beliefs, their Dreams, which were sometimes criticized, scoffed at, and even made the brunt of ridicule and laughter, and which sometimes were planned or implemented incorrectly, were none the less great goals for our nation. The goals have suffered a setback, but they will not be stopped by their deaths. It is up to those who follow to see that the ideals become realities.

We in education can in no way measure the problems of the schools with those faced by the world as a whole, and those of the total American society. But we do have demanding issues. The time has come for educators to dream again, but this time to reach for newer, greater, and higher clouds--to dream of significantly better schools. No longer can we content ourselves with the kinds of schools we have now in the United

States. No longer can we content ourselves with the snail's pace of change. We must do better, and we must make the improvements faster than ever before.

And if we in education can improve, perhaps we can contribute ever so much more to the dreams of those who envision a better America. Not only must we dream of the future, but we must implement many of those dreams now. We must have a commitment to action. We must stop our petty bickering about Carnegie Units, B minus grades, and the length of the lunch period. The time has come to dramatically change our educational system. We must search deeply for answers as to how we can make more significant contributions to our society. Giving students the ability to read, to compute, and to respond to examinations is not enough.

This book has been written for those who dream about better schools. Further, it is a way of saying thank you to men like Dr. J. Lloyd Trump, whose lifetime of dedication to the vision for better schools has especially inspired many, many young educators over the past fifteen years; but even more it is a way of saying thank you to those students and teachers at the Canyon del Oro School in Tucson, Arizona, whose dreams of living in the most exciting school in America were never fulfilled, because they were deserted by their school board, administrators, parents, and me; and additionally to those students and teachers in Port-au-Prince, Haiti; Taipei, Taiwan; University City, Missouri; the Lake Region of South Dakota, the Wilson School of Mankato State College, and to audiences at conferences in 31 states, all of whom have listened to my constant criticisms of their slow efforts to improve each day the educational experiences of Pete and Sally. It has been these students, parents, and educators, in these communities, who have taken time to listen and to try, who have made the practical application of theory possible; to them this book is dedicated.

Chapter B

application of theory to practice

-- a brief description of the 1969 program at Wilson School, Mankato State College, Minnesota --

This chapter is about the Wilson School; Chapters 1-8 which follow are not about Wilson; rather they describe how teachers, administrators, school boards, and parents in communities in every state in America can achieve innovation, change, improvement, and rapid revision of obsolete or inferior school programs; it does not matter whether the present program is labeled "innovative" or "conventional." All the schools in America, including the Wilson program described here, are badly in need of further reform. The "conventional" or "traditional" schools generally are in much greater need than the "innovative" schools, for at least the latter have started. Therefore, this book does focus more on helping communities change "conventional" schools, but many of the so-called innovative programs have fallen in a rut and are no longer progressing forward; therefore, this book should help these schools to renew their energies and further overhaul their early innovative efforts; many fine programs developed by innovators of the early 60's, such as modular-flexible scheduling, now face obsolescence in the 70's.

The purpose of including this chapter as an introductory one is not to suggest that all schools should be like the 1969 Wilson program. Wilson needs more quantity--more ideas--but it especially needs a great deal more quality. If a school is to really be a different and better school, it must involve itself in ongoing innovation. The Wilson of 1969 is tremendously different from the 1968 program, the year Wilson started its reform. Hopefully the 1970 design will be greatly improved; the 1971 edition should reflect further change.

The primary purpose then for a description of the Wilson program is to indicate that the commitment made in Chapter A, and the suggestions which are offered in Chapters 1-8 are practical--written by a practicing school administrator. The author has had the responsibility of implementing innovative programs over the past several years in Arizona, Missouri, South Dakota, and Minnesota. The Wilson School is one of these efforts. Further, the writer has recently had the privilege of speaking and consulting in 31 states and provinces of the United States, Mexico, and Canada, specifically consulting with over 300 school districts. Thus the ideas presented in this book have been widely tested in practical situations throughout the country.

No one is asked to agree with all of the suggestions, nor to look at the current Wilson program as a model. The intent is to convince educators and the general public that schools must be improved, and improvement at this point in time means massive change. A further motive is to indicate that change is relatively simple in a community--even in a hard-core "conservative" area--if successful guidelines, such as are presented in this book, are followed.

There are seven key ingredients to mix into the rapid change blend: (1) dissatisfaction--there must be discontent with the existing structure among at least a minority of the community (and there is in almost every town in America); (2) commitment--there must be a belief that better schools can be created; (3) hard work--the first two years, especially, the educators must be willing to work 26-hour days; (4) creativeness--there must be idea people who believe they can attack and solve the problems and frustrations which develop when change is attempted in a community. The other three ingredients relate to needed manpower. Change doesn't cost more, other than for catchup costs--new equipment, remodeling, or staff for expanded programs; but it does call for reallocation of resources. In terms of personnel, it does mean, (5) there must be leadership persons whose major role is the implementation of change, (6) there must be adequate clerical and custodial help, and (7) there must be paraprofessionals available to aid teachers and programs. The easiest way to accomplish these latter three needs is through differentiated staffing patterns, but there are other means.

The paragraphs in this chapter describe some of the 63 or more elements of change which are part of the 1969 edition of Wilson, and which can be implemented in most schools. It is true that Wilson is a laboratory school with students ranging from age 3 to age 20, mixed together under one roof, but all of the programs and methods at Wilson have been used in "normal" public and private schools throughout the United States. None are new to Wilson; each has been tried elsewhere. However, at this writing, Wilson has probably gone further toward the implementation of the following concepts than most any other publicly supported school in America: daily smorgasbord scheduling; self-selection of study areas by the elimination of all course requirements; optional attendance; the elimination of report cards, even in high school; student freedom and responsibility and the accompanying solutions to student unrest; human relations through choice of teachers and counselors and personality and perception matches; student planned curricula; and freedom of choice for "elementary" aged children. These efforts are among those briefly presented in the remainder of this chapter, and more extensively later in the book.

To fully comprehend the impact of the dramatic, rapid transition that took place at Wilson, (the same rapid transition is immediately possible in individual schools or in parts of schools in school districts all over America, and will especially be true in the early 70's), it should be understood that in June, 1968, fourteen months prior to this writing, the Wilson Campus School, the laboratory arm of the School of Education at Mankato State College, could probably best be described as a good conventional school.

It was good in that students scored above average on national achievement exams, many were successful in college, the parents were generally satisfied, and there were all ranges of teachers from superior through inferior, as one finds in most schools in America; those who were outstanding tried to develop exciting programs within the confines of their four walls.

Wilson was conventional in that teachers and students had to put up with all the usual but unnecessary restrictions and rituals of the majority of schools in America today--self-contained elementary rooms; period 1-2-3 secondary school bus-type schedules; study halls; bells ringing; hall passes; attendance notes from home; and the two great tragic evils of the present conventional system--group-paced instruction, and group required courses, K through 12; the only opportunity to experiment was that which an individual teacher chose to attempt in his or her own classroom. Unfortunately teachers have received little help from their colleges, either in pre-service as an undergraduate or in-service as a graduate student because the outmoded teacher training institutions and teacher certification requirements have continued to stifle creativeness.

On July 1, 1968, a dramatic revision began in the Wilson School. It was hampered by the usual restrictions: no money, no planned staff workshops, antiquated facilities and materials, and all the rest. But the new director came committed that Mankato State Wilson either had to become one of the most innovative, experimental, exciting schools in the United States, or it had to close. Fortunately many of the college administrators and the existing Wilson faculty felt the same; the decision was dictatorially made to attempt massive revision as rapidly as possible. All the staff had was a commitment that schools must become significantly different and significantly better. The initial effort was to develop an ongoing program of innovation which would attempt to implement and interrelate all the new, imaginative, and exciting concepts in education.

The current Wilson emphasis is on personalized programming--a program individually designed for each student. This is not just another educational cliche. It is possible and can be accomplished. To do so, a number of factors must be included and the mechanics and programs developed for each.

Personalized programming means that Wilson must be a Human Relations School. Personality/perception matches are essential. Teacher/student images of themselves, of each other, and of their relationships are crucial ingredients now missing in most innovative programs built around team teaching, non-grading, and flexible scheduling--and they are most certainly missing in most conventional programs. Positive motivation, daily success, positive self-image, and self-direction are more important at Wilson than the study of subject matter.

In matching perceptions, many of the old educational hangups are being eliminated. Students are now involved in designing their own relevant curricula--most actually plan their own learning--no "courses" in the traditional concept of teacher dominated courses are scheduled or taught. Students self-select their own learning areas. They choose the consultants (teachers) with whom they would like to work, in any area they wish to work; they choose their own teacher-counselors. As these matches are formed, in addition to the personality and perception matches, skills, interests, age, and sex of both student and teacher are factors to consider. Kids need an adult to relate to and they need to study relevant and meaningful material. Wilson is attempting to implement the cliche of individual interests, needs, and abilities written about in almost every educational textbook published in this century, but unfortunately, until now seldom practiced in the classroom.

As a result of these commitments, there are no required classes, even for the "primary age" children. Attendance is optional; an open campus policy is followed. Students can go home and sleep if nothing relevant is offered that day. To successfully implement all these notions, a policy of window shopping is followed. Students come to school and visit the many centers of study that are available--still traditionally labeled as art, music, theater arts, mathematics, and eight others. Students may work in any of these twelve centers or in any combination of any interdisciplinary or multidisciplinary approach they find of interest and value. Hopefully the next few years will witness great development of interrelated learning so that the idea of twelve subject centers will be replaced by more meaningful combinations. Wilson plans to start during the 1969-1970 school year.

In window shopping the student observes what is being done by others, looks at the materials, and has individual interviews with the consultants. If the consultant can help suggest a program which seems appropriate, or if the student can suggest and devise his own, or if a combination of student and teacher ideas seem to fit together, the student can start to work immediately. If nothing seems to jell, he can continue to window shop in that center or in any of the other areas. There are no maximum or minimum number of "courses" a student may take, nor is there a limit on the amount of time. He may take two courses in depth, or may be selective in ten. One pursuit may be followed for an exhaustive four weeks, or it may only be scanned for four weeks; it could be investigated for 18, 36, or 66 weeks--the student pursues the inquiry until satisfied or until time and other interests lead him to quest elsewhere. As the school fully develops its 12-month program, there will be no need for any formal registration other than an initial one. As students switch courses within a team, this is handled by the team. If a student changes teams, then an individual drop-add procedure can be provided at the time desired. Thus the staff always has a "count" on "enrollment."

His progress is evaluated in terms of learning objectives set through conferences with his instructors and with the parents whenever they request information or involvement. Hopefully much of the insight is gained through "dinner table" chats with students at home, but when teacher perspectives are desired, they are readily available by merely mailing to the school a parent conference form, to request written or oral communication from the school. To be able to respond to the parents, the areas being pursued by the student are recorded by the teacher-counselor and are kept on file in the central student folder. Their studies are readily changeable; students may start or stop courses whenever it seems desirable--whether November or March or August. The curricula is self-developed on a continuous progress, self-paced approach; there are no magic semesters or quarters or report cards and obviously no final exams. And there are certainly no "4th" or "7th" or "10th" grades. Students of many ages work together; the appropriateness of the mix is the criterion, not the number of years spent in school.

Thus a program is individually diagnosed and prescribed by and for each student. These diagnosis/prescription elements take into account student, parent, teacher, counselor, and society inputs. Theoretically, a student may take, and many do pursue, "anything they want." There are no graduation requirements other than just a general goal of about the equivalent of 20 traditional year courses, or combinations of mini- or micro-courses equaling that number, usually over a 3-5 year period, but these are only guidelines and are tailored to fit individual students. Often in practical operation, the student choice is made and modified through parent influences, teacher and counselor suggestions, and some colleges and employers who demand a union card (transcript showing a diploma with certain courses.) If students follow traditional restrictions, it is their choice. They are told of the alternatives: they can gamble on a future job or college based on maturity and other factors; they can go to a junior college or vocational school; they can join the army or get married, or make other personal choices. They are told many colleges no longer care about four years of English, three years of social studies, and two years of foreign language. But they are advised that some still do, and that if they want to be safe, they should take all the "nice" courses. To graduate from Wilson, though, they can major in "basketweaving" if they so desire.

Younger students have the same choices and follow the same program. However, at all levels, if the school really feels the student is making a tragic mistake, the student can be required to take a certain "course." For example, a five year old usually needs a great deal of motor development. Wilson tries to make the program attractive enough that all who need it will choose it, but if a poorly coordinated student does not choose motor development, and if the staff is fairly certain that this is an emergency crisis (the surgeon may make a decision about an unconscious dying patient)--the school will step in and operate. At this writing the staff feels that perhaps eventually the traditional grade 1 and 2 students may have about half of their week structured with a truly balanced group diet for the first few weeks of those years, while during the remainder of each week and of those years they may have free choice based upon individual considerations. The same might again occur at traditional years 7 and 8, with 3-6 and 9-12 being left entirely open. However, at this moment all students at Wilson have a completely open program.

Most days students attending Wilson select from the daily smorgasbord schedule. It tells what foods are available on the menu for that day--what fruits are in season. Many activities on the smorgasbord are student planned. Because all activities are optional, the daily program for the student is, in most cases, determined by the individual student. The only reason for a "schedule" at all is to let students know if any special events are being offered, or if any areas are closed, or if a consultant would especially like to see them, or to indicate that a group has been scheduled to meet for some specific purpose. The schedule is developed daily by three or four persons; students can help schedule, but usually these are teachers and paraprofessionals who serve about three days a month each on a rotation basis; it normally takes them about one or two hours a day to construct the schedule for 600 students. There is a part-time clerk and a part-time teacher-coordinator to handle ongoing schedule problems.

Wilson features individualized learning and phase teaching. Once a student has chosen art as part of his personalized program, he individualizes his pursuits within the field of art, or by interrelating with other fields. About 85 per cent of the day the student follows his own individually chosen schedule, although this is not rigidly fixed and varies from student to student and day to day. This 85 per cent is only a guideline; during this time the student is often in groups formed through individual needs and friendships, but not required or scheduled by the school. One of the five phases of "instruction" at Wilson is the one to one tutoring or conference between student and instructor. This can be scheduled by the student and teacher whenever both are free and does not appear on the "master" schedule for that day.

The second phase involves open laboratory. This simply is active involvement by the student in some phase of his study (painting his picture). When this type of opportunity is available, which is usually 95-100 per cent of the day, the schedule merely reflects open lab under the "art center" column--the student can go there whenever he desires. Closely related to open lab, but of less active physical involvement, is the third phase, that of independent study (an example would be reading in the resource center or listening to a tape in the automation center, or reading poetry in the English center). This is usually open to all students in all areas most all day; occasionally there may be some type of conflict which would close this possibility for some part of the day, but other areas are always open as alternatives.

The fourth phase is small group. Groups still play a role at Wilson but are only scheduled when students or teachers feel a need. A small group to discuss the topic of student unrest might meet when background study or interest indicates that such a session might be of value for those who would choose to attend. No groups are automatically scheduled to meet so many times each week at some specific time. The fifth phase, large group, is of the common thread variety and is an example of the specials on the daily schedule. Perhaps a well-known artist is in town and agrees to discuss his art form and demonstrate some general techniques to a group of interested students for a short period of time during the day.

Thus the daily smorgasbord schedule--a little ham, a little turkey, lots of roast beef, several salads, lots of milk, blueberry pie, and others--are offered each day or on some days for students to select. It is rather embarrassing, by the way, if no one selects the music pie designed by Mrs. Jones. It usually indicates problems, and Mrs. Jones often offers herself right out of a job. Attendance still remains optional; if there are no students, there is no position for Mrs. Jones.

To operate such a program, a great deal of team planning and less but essential amounts of team teaching must occur. Teachers must talk with teachers about kids or the entire program collapses. An attractive physical environment is of value, too. Wilson has carpeted some rooms, has plants and animals in some, and has brightly colored red, purple, green, orange, yellow, and blue walls in many.

Wilson tries to operate on a modified differentiated staffing pattern--doctors, nurses, nurses' aides, and candystripers. The school program is available on a volunteer 7:30-5:30 plan--teachers and kids come and go as they desire each day; no one is required to spend that amount of time in school, although many do--and not just the athletic teams. Wilson is trying to become a community school, open 24 hours a day, seven days a week. Rigidities found in the state college system prevent this at present, but the school does operate on a twelve month basis now, always open for study except for two weeks of winter vacation, one week of spring vacation, two weeks of summer vacation, and one week in the fall. These match college contract periods.

The twelve month idea is one of the most successful. Students are encouraged to attend 170 days during the twelve months for purposes of state aid, but otherwise can come and go as they please They can take vacation in November or January, or August. There is no reason for students to attend school only from September to June. Some parents can best take their vacations in January if they work in summer trades or tourist areas, or if father is low in seniority on his job. Some families never get a good vacation together because of traditional schools and their insistence on September to June enrollment. Wilson students have a continuous, self-paced individualized program, so nothing is missed if they are absent; they are encouraged to go duck hunting with Dad, even on a "school day."

The foreign language program at Wilson has great potential. Students are encouraged to take 3-6 hours a day of Spanish and/or International Studies. Immersing oneself in the language over a short period of time seems to make sense. As many as possible go to Mexico for six weeks or more each year. Spanish is difficult to learn in Mankato, Minnesota. Plans are now underway for similar programs in other areas of the world.

Students should be outside the school walls as much as possible. Therefore, Wilson students take their psychology class by working three 40-hour weeks at the state mental health hospital; they work in local offices; they take social studies while on vacation trips with their parents; they study by working in local city government offices--all these not for pay but for "course completion."

The five year olds are in school all day long and self-select on the daily smorgasbord as do all other students. The three and four year old programs are limited again by lack of state financial support, but Wilson has one-half day programs for each, merely by taking the money out of the former high school allocations. There are no elementary, middle, and high school divisions. Wilson is just one non-graded school. The various learning centers house students traditionally Prekindergarten through 12. It is not possible to really intelligently separate so-called "5th graders" from "6th graders" or "9th graders" from "10th graders," so no attempt is made to determine such false distinctions.

Research and evaluation were weak in the first year of operation at Wilson. This second year plans for extensive horizontal and vertical studies of both short and long range duration are being planned. A Research Systems person is now on the staff. The College Office of Institutional Research has taken charge of outside evaluation. A research committee for the school has been formed. Graduate students will do their thesis studies at Wilson. A Ph.D. in psychology has been hired to work with human relations and evaluation. Studies in the affective, psychomotor, and cognitive will be undertaken, with emphasis on the first two of these three. Hopefully by the end of 1970 and each year after that, some significant research and evaluation results will be available as a further contribution to the changing educational scene.

The school administratively operates through a Design Team. One person is responsible for Future Planning; another for Learning Resources; another for Student Services; and another for Human Relations. These four are fulltime autonomous persons who make decisions. If a "veto" is ever needed, it is wielded by the person in charge of Future Planning (traditionally the Director). Four part-time positions--Special Projects, Dissemination Programs, Student Affairs, and Research Systems--complete the seven man Design Team. These persons make decisions in their areas, function as a coordinating group for the entire school, and work with the various learning teams in small groups. The person filling the Student Affairs position is a non-paid student appointed by the Student Council. Large group faculty meetings are almost non-existent. In the meantime, the learning teams make daily decisions at the student level as related to programs, and students make individual decisions about their studies and group decisions through several types of student organizations. Parent, faculty, and student advisory teams complement the entire design. Parent involvement in the school program is greatly desired. But even more necessary is student input. Students help to make decisions at all levels, not just about Saturday night dances. They operate the student center; they have no dress codes; they are encouraged to protest. Doughnuts are a basic part of the Wilson philosophy; student involvement is one of the keys to success in changing schools.

One of the reasons for the Design Team, the delegation of authority, parent and student involvement, faculty decision making, and parent, student, and faculty advisory teams is the effort at Wilson to create an organization which will provide for continuous innovation, experimentation, research, and evaluation each year the school is in existence. Unfortunately most of the "name" innovative schools of the 60's have leveled off or have reverted. They have stopped too soon--they have not gone far enough. They have not continued to be a leader in change. Some schools must continually go "off the deep edge."

Change is no longer a theory, nor innovation just a "bandwagon" effect. Any educator with a little creativity, 26-hour-a-day efforts, and external support can accomplish the task. The problem has been to find enough leadership--with the proper support--willing to go beyond current programs. When that combination has finally been achieved in a few places, the leadership has usually moved on to "greener pastures" before the project has reached its potential. More money, better positions, enticing geographical locations, potential future, or just "battle fatigue" have led to the loss of key staff members in almost every innovative school. The replacements have usually come lacking the training to step in and continue the ongoing efforts; they have maintained the status quo, but usually have lacked the same "go-power" as possessed by the originators of the project As a result, education must wait for another "new model" to develop.

Wilson is another one of these efforts; it could plateau or regress as others have, if it fails to capitalize on all that is now known about changing schools (much of which is included in this book), or if the school is cut back by legislative economy drives, or if the present director or college administrative officials who support the project leave too soon and are replaced by less committed personnel. The early "change agents" have been a restless breed; in many ways this has been good as they have moved and helped spread the notion of better schools; they have sought new challenges; but at present the innovator ranks are thin. To keep the innovation projects under way, we now need "place" change agents (those who stay in one spot for some length of time), as well as "career" change agents (those who move often). Some must continue to move, however, as few in America are yet willing to take on the tremendous task of rapid revision, and unfortunately, the current revisions in most schools are still in the beginning stages or have only been surface or organizational innovations (modular scheduling), so the impact on Pete and Sally has not really been very great in most schools.

Realizing that we now do know something about changing schools, and that many current efforts never materialize, the Design Team type of organization at Wilson has been established to attempt to make this a long range project, as the current director will leave. If it is successful, more specific details of "how to do it" will be written about Wilson programs. If it fails, it still will have made a tremendous contribution to education by achieving fantastic, rapid, immediate success, further proving that many other approaches are possible in education--that different and better schools can be developed. Most schools have looked for cookbook recipes--they have wanted the "how" before they got the "why." Other schools have discussed the why so long, they never have reached the how stage. Hopefully the Wilson School is a blend of the why and the how; hopefully too, Chapters 1-8 which follow are the needed blend. There is much of the why schools should change, but unless a staff understands the why, all the hows in all the books in America won't be of any value to that staff. Most schools use the lack of how as an excuse not to involve themselves in massive retooling, when failure to comprehend the why, self-satisfaction with the status quo, and lack of committment usually are the real culprits. The mechanics which are covered in Chapters 1-8 come easy if there is a real desire.

In the final analysis, if a staff is truly going to develop a significantly different and significantly better school, they must take suggestions from consultants and books, they must look at their own strengths, weaknesses, and interests, and at their facilities, materials, and financial resources, and then determine their own pattern of change. There are many guidelines, but there are not foolproof mechanisms available at present to insure successful educational change in any community. Through Wilson type efforts, however, we do know one thing: Schools can rapidly and successfully change and become better schools. The Wilson program may fail in the long run, but it currently offers itself as an "idea center." If enough schools attempt new approaches, surely better ways can be found to educate youth.

Communities all over America are ready. As just one example of proof that the country is ready for change in education, included here is a letter Wilson sent to a random selection of colleges and universities regarding entrance to college without grade point averages, Carnegie units, class rank, and traditional grades; as Wilson does not give these items, it was essential that Wilson students could be admitted through other criteria. A copy of the letter and excerpts of responses from a number of the colleges complete this brief explanation of the efforts at Wilson in 1969. The first months have been tremendously rewarding; if the future months can develop as much, Wilson will have made a significant contribution to education in the United States.

Letter to College and University Admissions Offices - September, 1968.

Dear Sir:

The Wilson Campus School is a laboratory arm of the School of Education at Mankato State College, and as a school supposedly funded by the state legislature for the primary purpose of being involved in research and experimentation in education, has decided to undergo vast revision this year. In the past, this school operated a good conventional program. Until July, 1968, we had self-contained classrooms, a regular period 1, 2 type of schedule, study halls, ABC report cards, honor rolls, and the other usual programs found in conventional schools. Because we were doing very little different than the public schools in the state, the possibility of closing the laboratory school was given much consideration. After deliberation, it was decided to keep the school in operation, but to make it into an experimental research oriented endeavor.

We are enclosing a brief summary of the programs we have undertaken since July, 1968. We have started our three-four-five year old programs as indicated. We are building our entire schedule, K-12, on a daily basis. We have developed team teaching; our instruction is primarily through small group and individual efforts. We have students taking self-directed and partially-directed classes. We allow them a great deal of freedom and are working with our students to assume the same amount of responsibility.

We do not believe in failing any students at Wilson. Generally a failure is our fault for not providing the kind of program which would be of value. Many times these students have problems in the affective domain which need to be corrected before the cognitive areas can be improved. The student is not given credit for the completion of the course until he has accomplished it to the satisfaction of the teacher. Therefore, he does not fail it, he just does not complete it; nor does he make the honor roll, as we do not have one. We are interested in individual growth, not group comparison.

One of our many changes is an attempt to improve the evaluation of our students by providing something better than the traditional ABC report cards, K-12. The system involves many individual conferences between the teacher and the student, and the student and his counselor. The conferences culminate with individual parent conferences. The entire program is based on a diagnosis and prescription philosophy. One of our major efforts is to individualize instruction and to develop self-paced, continuous progress programs. We feel that this is the best plan for the majority of our students, and that grade point average and ABC grades have little place in the evaluation of individual students. "Grades" only had success as long as we were concerned with group structure and group prescription.

Our effort at evaluation is based on an initial diagnosis of the individual student's needs, interests, and abilities. Based on the diagnosis, we then try to prescribe an individual program for each student. Generally, every two weeks we try to evaluate the progress made by the individual students, and on the basis of that evaluation, continue the original program, or prescribe a new one, as determined by the amount of progress the individual student has achieved in the preceding program. We feel that if we are truly going to personalize programs for boys and girls, we must be student oriented; they should not be forced to fit an adult-designed curriculum offering little relevance to the student. Of course, for students who are planning to go to a specific college, we suggest that they take the courses that fit the demands of that school.

Whether we are successful or not remains to be tested. This is the purpose, as we see it, of a laboratory school in the state; no matter how good we may think our current educational programs are, we feel that Wilson should be different. Our role should be to pioneer new approaches to education; we are not going to know if the idea may be a better way unless someone makes an effort to try.

It is easy for us to evaluate our K-8 children; we keep folders on each student; our teachers and parents are continually informed of the student's progress. However, at the high school level, in addition to completing the same evaluation as we do K-8, we are attempting to work out a format which will satisfy employers and college admission offices as to a record of the student's success in high school, and indicate a prediction for future potential. At the present time we have not created a finalized format, but generally see it first as a description of the program undertaken by the student, and second, as an expression for the future. We expect to be able to state the objectives the student attained; we probably will include standardized test results and a subjective teacher evaluation as well. We see this as a much more meaningful description of the student than a grade point average and class rank.

Our purpose in writing you at this time is to request your reaction to these questions.

(1). Because we are a laboratory school for the state, would you be willing to accept our students on the basis of an evaluation which would not include conventional requirements such as class rank and grade point average?

(2). We are attempting to pattern a program through which we might find a more meaningful way of admitting students to college, and at the same time, relieve the high school program from being restricted by college entrance regulations. We do not want to hurt our student's chances of enrolling in college, but we do sincerely feel that grade point averages have no place in individualized education. Would you be interested in joining with us and other colleges and universities to develop a meaningful format?

Because we are a small school, we are not sure if there will be any of our students applying for admission at your institution this year. However, we are interested in corresponding with a cross section of the United States so that what we develop here would be applicable anywhere. Additionally, since our change in direction here, many of our students are interested in going to college wherever they might have an opportunity to participate in a learning environment similar to that which we hope we are developing at Wilson.

We look forward to your reply to our proposals, and would be interested in working with you in an attempt to improve the evaluation procedures for individual high school students.

Sincerely,

Dr. Don E. Glines
Director, Wilson Campus School

Responses from Colleges and Universities

"Suffice it to say, however, that you can rest assured, as far as ____________ is concerned, that the absence of the usual badges such as rank and grade average will not work against your students--we lean heavily on other kinds of evaluations anyway, so that your own recommendations and that of your staff, CEEB scores, particularly in achievement tests, can help to provide many of the answers we normally seek in the usual fumbling of the admission process.

I think we would be interested in joining with you and other colleges to pattern some kind of program; certainly if we cannot do this institutionally, I can work with you personally, for I am much interested in the directions in which you are moving (indeed, your letter did much to destroy some stereotypes I had about places like Mankato, Minnesota!)"

"Please know that this institution would give every consideration to graduates of the Wilson Campus School who might seek admission to the University of ______________.

We realize you would not be furnishing us with grades or class ranks in the usual sense.

We would have to know the specific pattern of subject matter the student has completed. We of course would have to have test data (we require the ACT). The key thing of course we would have to know is whether or not this student is recommended to us. In other words, do you believe he would be successful in his academic endeavors at the University of ______________? We would insist that you give us such a statement, in the absence of grades and class rank which we have been using as predictors for success here."

"Thank you for your letter of December 12 in which you have described your efforts to revitalize the experimental nature of the Wilson Campus School. I assure you of our enthusiastic support for your activity and our willingness to cooperate in any way possible.

Specifically, we would be more than willing to consider applicants for admission to ____________ from your school even though they might not present the traditional credentials. I assume you would be able to provide us with sufficient information concerning such candidates and their academic achievement so that we might make appropriate evaluations of their eligibility for admission. We would continue to require them to complete the Scholastic Aptitude test and three achievement tests of the College Entrance Examination Board.

We would be willing to consider joining you and others in the development of a program leading to more meaningful ways of college admission. I hope you will keep us informed of your progress from time to time."

"Many of the points that you have raised in your letter have also been discussed by the faculty and administration at ____________ concerning educational programs for young men and women entering college; therefore, I think that there should be no problem in working with you in having your students accepted at ____________ based upon your recommendation. We are attempting at ____________ to de-emphasize the grades similar to your program; therefore, we do not figure a grade point average on any of our students here at ____________."

"There would not be any difficulty in ____________ accepting Wilson students on the basis of an evaluation presented by the school supplemented by the student's SAT scores and an interview by an admissions staff member. We would also be interested in joining other colleges in an attempt to improve the admissions process."

"Thank you for your information concerning the program at Wilson. You have prepared a very interesting and provocative statement of your plans and procedures. ____________, too, is an institution interested in innovative and experimental procedures. We therefore look with a great deal of favor on your type of program, and would be happy to work with you on college admissions that do not include conventional requirements.

I would be happy to further explore the problems and possibilities of your program as a college admissions concern. Frankly, if we have a reasonable description of the type and amount of work attempted by the student, plus your own evaluation and anecdotal record of students, plus the CEEB, SAT or other standardized test score, I think that a decision that is fair to all concerned can be made."

"I am certain that our Committee on Admissions would be most willing to consider your students on the basis of an evaluation which would not include the conventional class rank and grade point average. In lieu thereof, I am sure that we will find much additional data to assist us in evaluating these students.

I am certain that we would be very interested in at least discussing the possibility of joining with you in an effort to pattern a program which may lead toward different and more meaningful ways of admitting students to college."

"You may rest assured that we will consider your graduates on the basis of whatever information you are willing to provide. My only concern, which I am sure you share, is that when decisions are required we have sufficient information to make as good and fair a decision as possible."

"I was most interested in your recent letter telling us about the Wilson Campus School. The program sounds exciting and I feel sure that the youngsters going on with their education from your institution will have benefited greatly from their experiences there. ____________ is attempting to put into practice on a somewhat larger scale what you are attempting to do in your laboratory school. I am taking this opportunity of inviting you to visit the ___________ for I am sure we can both grow through the exchange of ideas."

"Any university will take an anecdotal record in lieu of A's, B's, and C's. The Eight Year Study (the Harvard Report) indicated this many years ago. All a university would like is an accurate description of the student's accomplishment and level of performance."

"In our admissions program, we are not inflexible regarding secondary school transcript requirements, and over the years we have had a considerable amount of experience with so-called unconventional secondary schools that follow a system of written evaluations rather than grades and no ranking procedures whatsoever. We can work with this kind of unorthodox reporting system quite satisfactorily, and the candidate in question is not in any way handicapped as a result. I might add in passing that ___________ has moved away from a conventional grading system this year, and we are now operating entirely on a credit-no credit plan."

Chapter 1

ENVISIONING EXCITING SCHOOLS

The first step in changing any school--in any district--is to truly envision an entirely new kind of education. The attitude of the staff must reflect a belief that educators can develop better schools, and that there is a need to do so; with this open ended questing for potential improvements, schools and school districts are free to objectively scrutinize everything they are now doing--asking themselves hard questions in the process. They should be free to dream about utopian accomplishments. Therefore, for purposes of this chapter, it is assumed that there is a need to search for new directions in education. What changes might occur? Why should they be supported? How might these improvements be accomplished?

There are probably more than 63 revisions presently occurring in schools; one of the most obvious, but certainly not the most important, is that of plant design; the exterior physical shape is going to change dramatically. No longer will the egg crate building continue to dominate the city and country landscapes. Inwardly the shape will change too. No permanent interior walls will be constructed. But more important than all the exterior or interior physical changes will be the new relationship between the teachers and students. The Human Relations School--schools concerned with self-image, personality, perception, daily success, relevancy, and positive motivation are the schools of the 70's. For years we have ignored the research. We have pretended to know the answers. We have said math is more important than music for ALL students. Yet there is no evidence to support such decisions. With conventional group paced classes, all students have studied the same material at the same time and have taken the same tests; they have been divided into "smarties" and "dummies" by a system called A B C D F--and even worse, in addition in some institutions into a caste system variously labeled as ability grouping, levels, gifted, remedial, and tracking.

The new exciting schools envision individual prescriptions. They recognize the horror of continuing programs and rituals which more often resemble jails than schools. They know now that the individual's self-image, his ability to find some measure of success each day, his perception of the teacher and the teacher's perception of him, his personality and the teacher's personality, the skills, interests, ages, and sex of both parties, and individual styles of learning all have much more to do with the learning process than do group-paced required classes and irrelevant content or basic skills that supposedly all students must know. We pretend that the basic skills for all students are reading and math and spelling, but for many students, the needed basic skill at this moment in time is best learned in industrial arts. How many achievement tests used by most schools in the United States concern themselves with more than English, mathematics, social studies, and science? There is dramatic need to wipe out the cobwebs which are now ruining education. Schools are in need of a drastic, immediate overhauling; otherwise many students should not continue to be required to attend. Schools have negative effects on many--probably even on a majority. Traditional school programs and regulations are the major cause of student unrest.

If we took all the schools in America and put them on a continuum of 1 through 5, as we do to children, 5 being the best schools and 1 being the worst, no school in America would rate a 5. There is not an excellent school in America today. More schools than we care to admit would rate a 1. A few schools would rate 4. Most schools would rate a 2 or a 3. Most schools in America are dull and unimaginative. They are not exciting places for boys and girls to spend the majority of the day.

If this opinion is accepted, then what we need now in education are some "vice-presidents for heresy"--people who are really willing to envision different schools. For years educators have been taught to be content, to sit quietly behind the desk, and not "rock the boat." Superintendents have been worried about being fired--they have had to be concerned with keeping the community happy. However, now we are saying that it is time for some administrators and teachers to be willing to get fired, and not just over working conditions and benefits or poor public relations. We want educators more adamant about learning than salaries. How many teacher groups are now refusing to sign contracts over the issue of eliminating report cards? Increased salaries are great, but shouldn't teachers help kids too? We want educators to fight for change in education, for if change means improvement, then change must be accomplished in each community. There are many jobs open in communities all over America for educators who are willing to be vice-presidents for heresy.

In a specific school now, this task of leadership for change becomes that of the principal. Hopefully, in the future, schools are going to revise their entire administrative setup. But currently the way the majority of schools are organized, the administrators can block or promote improvement; most schools today reflect the principal.

If change is going to occur, the principal must literally get the nuts and bolts desk out of his office; in fact, he should give up his office and work instead in the future planning center. He doesn't need the typical kind of administrative environment found in most educational institutions. It is usually easy to identify a dull school just by walking into the main office. Normally the principal is found sitting behind his desk, most always with three straight chairs facing him, so that he can peer over the desk as the voice of authority; some administrators are innovators--they have two or four chairs instead of three. While he attempts a conversation the phone usually rings; it is Mrs. Jones, upset because her son said there was too much mustard on the hot dog. Then a teacher or secretary interrupts to have a bus requisition or a financial voucher signed; the principal sighs at the stack of letters to answer; it can be assumed that there is no need to visit this school.

But if visitors can't find the principal, if he is out working with a team of teachers regarding learning and instruction, or working with a group of students on accepting responsibility, guests can expect this to be an exciting type of school. The administrators who are convinced of and committed to the idea of change are the administrators who have taken the desk out of their office. They are out working full time as change agents, helping teachers and students accept new ways of learning.

Educators must ask themselves: "Who am I, and how do I fit into this concept of change?" The principal, for example, should see himself as the idea man, the change agent, the vice-president for heresy, the needler, the crowbar, the screwball, the nut, the madman, and some things we can't put in this book. Currently in education, some "change agents" are full time school directors--superintendents or principals; some are full time school consultants for innovation; some are state department employees; some are college professors. But whatever the official title, the real purpose is to see that change and innovation and improvement in the learning process occurs. If schools are going to change, creative educators must lead that change. Each educator must soul search his real degree of individual commitment toward helping retool the educational system.

Why is there this tremendous need for change? Is it really necessary? Aren't present American schools good? What about past efforts and past successes? Don't we have in this country doctors, and astronauts, and construction workers, and other kinds of successful people? Isn't it true that we are one of the best educated countries in the world? Aren't schools in the United States now better than they have ever been? Even if these comments are true and are accepted as evidence of previous success, there are now additional factors to consider. For example, this past year more money was spent on educational research than the previous ten years combined. We know more about boys and girls than we ever have before.

Experimental schools around the country have proven that though their programs are not necessarily the best, there is more than one way to organize; they have shown we can run schools completely different than we have these past years, and still be successful in the teaching-learning process, and in fact, usually more successful than in the conventional program. Further, look ahead to the year 2000. When we are objectively honest and think critically about the future, we must accept the realization that almost all that we have been teaching in the past conventional schools--the content oriented courses, and regurgitation on tests on Friday--certainly is not the way to prepare students to be inquiring, discovering, decision making, process oriented learners for the next century.

But before looking at all the new and better ideas--before envisioning new kinds of schools--look at some of the striking deficiencies in the present best conventional schools. Look at the way we still teach most subjects. Algebra is a good example; in most secondary schools we still teach algebra for 36 weeks. A traditional course in algebra probably should not even be taught, but if we are going to teach it, why for 36 weeks? The very top mathematic students can learn everything in the traditional algebra book in about 6 weeks. Slower students can do better than they have in the past, if they can study algebra for 50 weeks rather than 36; but the present system puts them all into the same classes because they are all going to college. Some schools have tried alternatives such as tracking and different textbooks. However, regardless of the grouping system, look at what happens to the students once they arrive in class. The teacher walks in and says "Oh, isn't it wonderful, boys and girls; we're going to spend the next 36 weeks learning algebra together. Yes, each morning from 8:30-9:25, 5 days a week, 55 minutes each day, for 180 days, we are going to have such an exciting time. And realizing it is so exciting, this week go home and work hard on chapter one, because we're going to have a test on Friday."

Johnny goes home Monday night, looks at the chapter, learns the material, and is ready for the test on Tuesday; he is the MIT, Cal Tech type student. But can he take the exam on Tuesday in most schools; no, because most schools do not yet have self-paced instructional programs in mathematics; therefore, Johnny must twiddle his thumbs and waste away the rest of the week waiting for Friday and the exam. But, when it comes, does he get his A? Oh yes, he knew he would, the teacher knew he would, we all knew he would; he got an A in 8th grade, and it is basically the same except the cover on the textbook is a different color; however, he had to wait a week to get the A. We pat ourselves on the back and say, "Don't we have wonderful schools, and I'm such a good teacher." Johnny got an A; he'll succeed in college; mama and papa can boast over the bridge table that their son received an A.

Mary, another of the algebra students, comes in on Friday too; she's worked hard all week: perspired, struggled, burned the midnight oil, tried to get help from dad, fretted and stewed; she finally takes the exam and then worries all weekend; but happily, Monday morning we pass back the paper and sure enough Mary heaves a sigh of relief--she got her B- or C+; she is ready to go on to chapter two; she is still eligible for college. But, poor old Pete; he comes in on Friday; you know he's not ready, I know he's not ready, Pete knows he's not ready, everybody knows he's not ready, but does he take the exam? Oh yes, because it is scheduled; then what do we do on Monday? We return the test with his D- or his F, and say to him: "Pete, you are going to have to work harder and study more and come in after school for extra help; I'll have to send a note home to your parents, you're going to be ineligible for the football team and all those wonderful things." And then we do another wonderful thing; we say to Pete, "Even though you don't know chapter one, go ahead and study chapter two, because we will have a test on it next Friday." This is repeated in classes all over America in many, many subjects; algebra is but just one small example. Need we wonder why schools must change?

Look at the problem of libraries in the United States. The traditional concept of a library is already obsolete, being replaced by new developments concerned with library resource centers or media complexes. However, the tragedy is that most schools in America are still trying to develop adequate libraries in terms of the old standards. Until recently, only 30 per cent of the elementary schools in America have had a library; practically every one of the junior and senior high school facilities are too small, understaffed, and certainly lacking in materials. As a typical example, look at what has been one of the best school districts in America, traditionally speaking, at least by reputation. Three years ago, this school district had no elementary school libraries; they had so-called room libraries in each school where, when culling the shelves, 1895 editions of books were found. The junior highs had space about the equivalent of two classrooms and only a few fiction books and magazines and several outdated encyclopedias. To be specific the high school library housed only 70 students of an enrollment of 2,000. There were only 10,000 volumes in the center, 5,000 of which were obsolete--Modern Africa Today, 1929 edition. The school district was spending only $1.70 per student for library books. American Library Association was recommending $6.00 per student and now recommends $8.00 per student. Yet these conditions existed in an "outstanding" school district in 1966. Fortunately that district has dramatically changed that situation in the past three years.

One may ask how the district could be outstanding with this library situation. Remember, traditionally speaking, students have been tested and evaluated on the basis of memorizing content found in textbooks and teacher lectures, and then regurgitated on national examinations. With enough textbooks, superior I.Q. students, and good traditional teachers, it is no wonder that district scored well on college entrance exams and state content examinations.

As we further envision the need for change in schools, we can now perhaps turn to some of the 63 or more specific revisions. As a starting point, we shall consider first some of the changes taking place in the areas of learning and instruction, followed by a few in the areas of curriculum, structures, facilities, and evaluation.

One of the first things the new kind of school is envisioning is that of personalized programming. Requirements in the past have been so rigid that content has been considered before the individual. The program became "the important thing." If Johnny would like to spend two hours in science on a given day and Mary would like to spend two hours in art, it has been practically impossible in most schools, because the schedule and requirements call for one hour of art, one hour of English, one hour of history and one hour of physical education. Many students on some days should spend several hours in a particular subject area, but in the traditional schools the student certainly couldn't miss algebra, and to lengthen the art period would mess up the schedule. When there is a commitment to individual diagnosis and prescription, personalized programs automatically follow; students should be able to spend several hours to all day in one area of interest.

As we personalize programs, there will be no need for medium sized groups of twenty-five or thirty; instead they are replaced by the five phases of individualized instruction. There is nothing that a teacher does with 25 or 30 that cannot be done as well or better in a different sized group. A few large group presentations are still appropriate in individualized instruction for motivation, information or exposure not readily available in other forms. These are usually common thread large groups where the topic is of general interest to the group, but not specifically geared to page ten of any book. Large groups related to skills are still appropriate too when we remember that LG can be 1, or 300, or any number; if the methodology is LG, it does not matter as to size. One student listening to a teacher-prepared taped lecture is still involved in LG technique. However, we are finding that large groups are seldom used in the far out innovative schools, and those which are offered are optional in attendance.

In small group situations, preferably 5 or 6, but seldom more than 10 or 12, students around the table or in soft chairs, or on the rug, can do a much better job of discussing and sharing what has been presented in a large group, or what has been learned in independent study or open lab, than they can learn from something we label discussion in a room where a group of twenty-five students have their backs to each other; small group instruction, as well as discussion, is a valuable method, too. Much of the learning should take place in independent study activities, where every student is on a different yet sometimes related study. The fourth phase of instruction in the new kind of school involves individualized open laboratory experiences. The final phase, and probably the most important, is that of the one-to-one student-teacher conference.

In other words, most subjects should have some large group, some small group, some independent study, some laboratory experiences, and some one-to-one conferences, but basically, none of the material should be presented in the traditional medium sized group, arranged to meet the requirements of educational ritual and room size. The percentage of these five phases will vary. In some subjects such as mathematics, less than 5 per cent may be in large groups. Perhaps 15 per cent might be in small groups, perhaps another 30 per cent in laboratory, about 35 per cent in independent study, and maybe 15 per cent in one-to-one conference. In English it may be more balanced. Perhaps 10 per cent of the time might be in large group, 25 per cent in both small group and independent study, 20 per cent in laboratory and 20 per cent in conference. In science, the emphasis might be 40 per cent in individualized open laboratory, 15 per cent in small group, 15 per cent in independent study, 10 per cent large group, and 20 per cent in conference. In social science the figures might reverse themselves; perhaps 20 per cent might be appropriate for large group, 25 per cent for small group, 25 per cent for independent study, 20 per cent for one-to-one, and 10 per cent for laboratory. In other words, the amounts of time in these areas will depend upon the teacher and the curriculum. Actually the times should be according to each individual's needs, not the group, but as a starting place, these kinds of percentages have proven helpful to teachers in the early stages of change. Generally, about 85 per cent of the student's day should be in areas of independent study, open lab, and one-to-one conference; the other 15 per cent can be in planned small and large groups, but still optional in attendance. With complete optional attendance, no required classes, and personalized programming, as is in operation at the time of this writing at the Wilson School, students spend about 5-10 per cent of their time in formal groups; 90 per cent is spent in informal student formed groupings or individual work.

These revisions in teaching strategies are going to be forced by the computer. Computer assisted and computer based instruction, dial access retrieval systems, individualized automated devices, and all kinds of technological innovations are on the market now. They have not been practical for wide scale use, but they will be in the very near future. When we realize the developments that have taken place already in the technological age, we know it won't be long before teachers will be forced into new methods. Fortunately, this is going to be a great asset to education; when teachers must become motivators and listeners and stimulators rather than spoon feeders of information, learning should improve. We must stop the situation where teachers talk two-thirds of the time, where students do busy work about 30 per cent of the time, and where only approximately 3 per cent of the time is actually spent in student interaction. When it is realized that often a teacher in a classroom talks more than all the students combined, it is a rather alarming situation.

Learning opportunities call for non-grading, student determined curricular experience, and flexible grouping. The philosophy of taking the student from where he is, and moving him as fast as is desirable, as far as is desirable, will change group learning theories. If little Mary only gets half way through the present so-called first grade work, that is just fine. If Janie gets through what was traditionally one year of work, that is fine; if Sally gets through two years of work in one year, that is fine. No longer are we going to stuff Mary into the "second grade" when she isn't ready, or fail her and retain her in the first grade, neither of which is the right answer. No longer are we going to prevent Sally from moving into the second grade materials because of the problem of what the second grade teacher would then teach. In a continuous progress program, students are going to be able to work as far as they can as fast as they can.

The philosophy of continuous progress and self-pacing means that present grouping methods are going to change. Homogeneous grouping, sex grouping, sociogram grouping, and interest grouping are all wrong, if they are done permanently; on the other hand, they are all correct if they are varied flexibly according to the instructional tasks. On a given day, it is quite appropriate to have homogeneous grouping; another day it is more appropriate for interest grouping or heterogeneous grouping or sex grouping, or sociogram grouping; the team of teachers must draw from a pool of students; teachers and students determine the kind of grouping if any, that seems appropriate for that particular day on a daily basis. On many days a student or teacher will have no group meetings scheduled.

As we envision these kinds of changes in teaching and learning strategies, we immediately must change the curriculum, for now we can truly individualize learning through continuous progress, self-paced curricula.

The concept of individualizing means that in theory every child will be on a different page in a different book at a different time, or in a different program or activity; each child will be able to pace himself as fast or as slow as needed in the materials he is using in as many different areas as is desirable; when the materials or projects, or areas of interest are completed, the student can go right on to the next pursuit without waiting for anyone else. This means traditional final exams must be eliminated. Any school still caught in the trap of giving final exams certainly has not individualized and self-paced instruction. Note the current obsolescence of most universities!

Then take a look at the area of early childhood education. We know that current programs are wrong, yet most schools have not done much about them. A few lighthouse districts are trying; some of the early studies have shown that unless a student develops the verbal, motor, associative, visual, and auditory functions in the early childhood years, that student is not ready for the curriculum we try to put them into when they come to the so-called first grade. Some districts have had as high as 65 per cent of the entering kindergarten children score low on one or more of the diagnostic tests in these areas. The highest percentage of poor performance on some of the individual tests in various districts has been that of motor encoding, and yet motor encoding is probably the one that should be developed before the other four functions can fully bloom. The question is, how many school districts in America today diagnose and prescribe an individualized kindergarten program concerned with these learning functions?

As a specific example, how many districts in America have full time trained physical educators working with kindergarten children about one-half hour or more every day on individual development patterns? If the school district is paying any attention to the research at all, then it cannot justify the programs that currently are going on in most secondary schools. If money is limited for physical education, it must first be given to the kindergarten. Whatever is left goes to the first grade, then the second, and so on up the ladder. Hopefully, there will be enough money for all children. But if it must be limited, then no school system should have physical education in the secondary school until it has outstanding instructional programs concerned with motor-encoding activities at the kindergarten level. And certainly, high school athletic programs would have lower priority than kindergarten yet how many districts support high school athletics, but will not support kindergarten physical education?

In looking at what is happening in packaged education programs in secondary schools, the picture there is rather bleak, too. Many school districts still have courses called Modern World History. The textbook they often use is one dealing with Western Europe only, and the instructor spends an entire year on the history of Western Europe from 1700 to 1900; they never get around to talking about Africa, Asia, Latin America, Near East, Vietnam, and the population explosion; these things are not modern world history. Other schools still require every student to read "Hamlet," and what is worse, require every student to read it at the same time using the same book; students are on the same page regardless of whether their reading level is sixth grade or sixteenth-grade level, and they all take the same test on the same day and are expected to get the same answers. The obvious is the result: some students get A's and some students get F's, and then we claim that one of the objectives in English is to have students appreciate literature.

We still teach French 55 minutes a day, five days a week, for four years. It's the most ridiculous way in the world to learn a foreign language. We are probably one of the few countries in the world doing it, and yet we defend it, because my goodness what would happen to the schedule if they had more than 55 minutes a day in French? What would the algebra teacher do if she couldn't see the children every day, and so between the battle of the French teacher perhaps wanting more time, and the administrator wanting to give her less time, schools stay locked into five, fifty-five minute periods per week.

As we plan and envision changes, an organization that will allow change to occur is essential. One of the things that must be adopted is a PIE in every school. In other words a teacher's task is to Plan, Instruct, and Evaluate. The most important things that teachers do are to Plan and Evaluate. Right now they spend most of their time in Instruction. The teacher should Plan and Evaluate at school, not at home as she does now. She should be teaching or tutoring only ten to twenty hours a week, not twenty-five to thirty. In other words, the teacher's load should be cut in half. And this does not mean doubling the staff; it can be done with a new organization. In completely individualized schools teachers still often work long hours, but they are in conferences with students. The students use the time preparing for the conference--the teacher does not take the obsolete lesson plan approach because group classes are no longer taught.

The way most schools are now organized, a teacher has students almost all day; perhaps in the elementary school she has a half hour off for coffee. Most of these teachers are housewives; often the principal keeps them after school for a faculty meeting or some other kind of session; they hurry home at five o'clock remembering that they have nothing in the refrigerator for dinner. One of them stops at the store and grabs some stew meat. This is the first thing in sight, and she remembers there are a few left over vegetables. She comes home and gets the stew started; the kids come in: "What are we having for dinner tonight, Mom?" "Stew!" "Stew!" "Oh I hate stew." They fuss and fume a little bit; then the husband comes home and he is in a hurry and a little bit tense because he has to go back to a meeting that night; "what are we having for dinner tonight?" "Stew!" "Oh, not stew," and they fuss a little bit. Finally the dishes are done and the cake is baked for the next day, the kids are off to bed, and now supposedly at 9:30 at night, the teacher is to sit down and be creative, exciting, and dynamic and develop a three ring circus for boys and girls the next day. Well, it doesn't happen. The good teachers do their planning on Sunday; the poor teachers don't do it at all--that's why they are poor teachers. If the good teachers do it at home on Sunday they are doing it in isolation; they ought to be doing it with other team members. The kind of planning they do at home should be the dreaming and a little individual preparation for student conferences, but the basic plans and preparations ought to be performed at school, either individually or in conferences with other professional teachers, depending upon the size of the school, the type of team, and the learning being planned.

This means that team planning, team diagnosis of individuals, and team teaching are essential parts in envisioning a new kind of school. Self-contained classrooms are obsolete, as well as departmentalized programs in high schools. Some of the worst resisters to change are department chairmen. Teachers should sit around a table, sharing ideas, talents, strengths, and weaknesses. The KEY to teaming is discussion of individual students by teachers who have in common the particular individual being considered. As teachers do this team planning, team diagnosis and prescription, and team teaching there is going to be increased demand for teacher aides. Para-professionals are a tremendous asset in any school. It would be nice if school districts would provide the same number of teachers they now do plus hire teacher aides in addition. The problem is that money probably will not be available for this in the near future; therefore, in most school districts, the teacher aides must be provided by rearranging professional loads. For example, for 175 students, instead of hiring one teacher for every twenty-five, or an equivalent of seven teachers, a district should hire five teachers, and with the money left over from the other two, hire six aides. This is a one to thirty-five professional ratio, yet it gives eleven adults to work with boys and girls, and a one to sixteen adult ratio. This is coming closer to the kinds of adult help we need in the schools. It provides teachers with para-professional help for tasks the teachers themselves do not have time to do, or do not have the skill to do, such as typing, audio visual setups, artistic drawings, and other. Teacher aides must be used more than most schools now provide.

As team teaching and team planning become part of the program, teacher controlled variable scheduling is another must. Daily scheduling allows for time to dream, eliminates the boredom from the school day, provides flexibility, arranges time for planning. Administrators should not control the schedule nor should the schedule be made up in the spring or summer of the previous year. It is impossible to predict what Johnny needs on a given day, a year in advance. The teachers and students should develop the schedule based on the instructional tasks for that particular day. The best current type of scheduling is daily smorgasbord scheduling. This concept will be discussed in great length in Chapter 6.

Every different and better school must have a heart--and the heart here is that of student freedom and responsibility. If we as educators really believe in developing self-directing, responsible, decision making, value judging, perceptive individuals, then we must give students opportunities to develop these traits. In the present elementary schools where students are with the self-contained teacher most of the day, and where they are supervised constantly during recess and lunch periods, and in the high schools where students are in study halls and have hall passes and bells ringing, and where at both levels the majority of classes are required, it becomes almost impossible to fully implement the concept of student freedom and responsibility.

This concept, along with that of optional attendance, will be discussed as part of daily scheduling in Chapter 6. However, mention here must be made, in terms of envisioning a new kind of school, of the need for optional attendance and self-selection of courses. To class or not to class, that is the question. This is appropriate for both elementary and high school students. Some schools have experimented with this and had great success. Some schools have turned all the students loose and then pulled back those few who could not handle it. Some have started the other way by giving responsibility cards to those students whom teachers thought were ready, gradually increasing the number over the years. This latter approach has worked well in inner city type schools, especially when interwoven with choice of classes and relevant curricula.

Experiments have been done, for example, where in one suburban "eighth grade," students were given two weeks in which they had wide choices; they could sleep all day, or play the piano, eat, talk to their girl friends, or most anything they wanted to do, but at the end of two weeks they were tested to see if they had learned anything in their assigned classes, because that is what their parents expected to have occur. The teachers who volunteered for the particular project had identified the students, they were not all straight A students, but ones the teachers thought could accept responsibility; these students were given outlines of what was to be covered in each of the classes; some of the students, the next two weeks, did not see a teacher of history, for example, during the entire two weeks, other than to wave "hi" in the hallway. At the end of the two weeks, some of the students came in and scored higher on the teacher made exam than any of the students who had been in the class the entire time listening to all the gems of wisdom and pearls of knowledge the teacher had to pour out.

It makes teachers take notice and ask themselves, "What would these excused students have done if they had been in my class listening to me the entire two weeks? They learned everything and more without being in my class." Such projects have received further experimentation, and it becomes even more apparent that students stay away from teachers who are not reaching the needs of boys and girls. The principal can walk down the hall and see Mrs. Jones and say, "It's nice you're free this hour, I have been wanting to see you." Mrs. Jones says, "No, I'm supposed to have students." The principal then says, "Well, where are they?"

If the desire is to have teachers accept team teaching, optional attendance is one of the fastest ways to get them there. Teachers do not want to take the blame by themselves for students not coming to their class. The studies have indicated that students return to the classes after a couple of weeks; they get tired of eating doughnuts and sleeping on the grass, but they return to those learning areas where the teachers are exciting and concerned about the goals of the learner; they stay away from those subjects where the teachers are concerned about content and the goals of the teacher. A number of schools now operate on an optional attendance philosophy. The Wilson School, as described in Chapter B, is one of those which allows complete self-selection of courses, optional attendance, and student-planned courses for all students, kindergarten through the senior year. It is an exciting concept and works beautifully when fully implemented.

As we envision changes in the area of facilities, one of the problems mentioned earlier is the complete lack of library and/or learning or media or automation resource centers in schools. Looking even beyond the traditional school libraries presently housing books, we need to think of a time in the not too distant future of technological advances, of the eventual use of microtransparency, to a day when large numbers of books may not even be in resource centers. But right now, without technology, schools need an environment for students that is entirely different from the present inadequate so-called libraries which are provided in most schools. It is hard to find an acceptable library in any public school in America.

The resource centers ought to be carpeted and air conditioned. There should be soft furniture, couches, chairs, footstools, and reading lamps. When an adult at home decides to read a book for pleasure, usually the adult looks for the softest chair, the nicest reading lamp, and the footstool and really sits back to relax. Young children lie on the floor. What do we do in schools? We ask them to sit in the hardest chair, at the hardest table we can find in school, and yet we say, "Enjoy reading!"

In addition to a soft reading corner, there ought to be wet carrels and dry carrels. The dry carrels provide independent desks where students are not bothered by constant interruption of other students getting up and down and passing by. The open tables we have in most schools today are fine for student discussions or for girl watching, but certainly are not conducive for independent study. Tables are made for conferences, not for 4-6 in independent work. The wet carrels ought to be available so students can plug in electric typewriters, tape recorders, and other presently available tools in preparation for the day which has already arrived in some facilities where dial access retrieval systems or other types of automated equipment and computer assisted instruction will take over much of the present task of a teacher.

In addition there must be listening and viewing rooms, if these types of functions are not available as independent areas with quiet head sets for listening to tapes and viewing television. Students ought to be able to view and listen, and create a variety of materials throughout the school day in the automation or media center. The philosophy of these centers should be that every student has an opportunity every day to go to the resource or media center, if the student so desires, but that no student is ever required as an individual or as part of a class to report to the library to be forced to sit there and supposedly study or read or listen to tapes.

In further developing better facilities, there is an exciting new slogan being used as we remodel the current schools and hopefully build schools of tomorrow; it says, "Knock out the walls and eliminate the halls." The number of walls and halls in schools ought to be reduced by about three-fourths or more of the amount now present. Schools ought to be envisioned as a big open barn. In theory every student would be in this open barn and never need a teacher, because after the student has received an individual diagnosis and prescription, that student then can go to work on his own to carry out the prescription developed via the teacher-student interaction. On many days in many subjects this theory can be put into practice; large groups of students can work in different environments throughout the school in various independent projects. Practically speaking, we know that there will still be a demand for various kinds of groups, some large and some small. These groups should be based on the instructional tasks of that particular day. If a teacher would like to present a large group presentation she can demand a group. If she identifies four students with common learning difficulties, she can pull those students in as a group. Or the students can demand groups; if several students decide they need help on paragraph construction or want to discuss a particular topic, these students can ask the teacher for small group. The groupings in the small sessions can be either for instruction or discussion, again based on the tasks at hand. There should always be alternatives available.

Teachers say this is impossible, that it is merely a theory, that we could not possibly have a big open barn with small conference rooms, independent study areas adjacent and large listening areas where students could pretty much determine their own program needs each day or where the teacher would individually diagnose each day; but all they must do is imagine themselves in a doctor's office with twenty-four other patients. They expect the doctor to call them in one at a time and diagnose their problem and prescribe the remedy. They also expect the doctor to have alternatives; if the penicillin does not work, they hope the doctor will prescribe sulfa.

The big open barn schools now in existence have generally made two mistakes: they forget that many of us have a need for absolute mousy quiet at some times during the week, and that at other times we need to holler and scream. The big open pod with acoustical flooring and dampened ceilings and "constructive noise" are great for 80-85 per cent of the student's time; but there is still a need for some areas of the barn to be set aside for mousy quiet reflection or vibrant kinds of reactions. The other mistake is that they have generally put the same curricular experiences in the barn--they have retained "7th graders" and have said they all must take English, and basically, except for new textbooks or teaming, the course which was taught in the egg crate.

It seems strange that with all the knowledge we have about schools and about learning, that we still prescribe bells ringing as part of the school ritual in a huge majority of the current schools. Hopefully this statement will become rapidly obsolete. Hundreds of schools around the country have turned off their bells. It's a wonderful environment; it's quieter, students do not run down the halls and race to beat the bell; there are no tardies: no bells, no tardies. An entirely different atmosphere is created as well as one that fits the concept of student freedom and responsibility. People ask, how does turning off the bells make a better school. The reply is simple: what research is there to support the notion that ringing bells in a school helps the learning process? Having them off prevents the buzz of a bell interrupting a thought. We do not have enough research on bells and learning to make a clear-cut statement, but if we cannot get bells turned off in schools, how in the world are we going to bring about other kinds of more important changes? The bells are merely symbolic of the difficulty it is to remove traditions from schools once they are established. Bells have been ringing for no specific purpose for years, and yet we continue to ring them without much of a challenge.

If we are going to implement all of the changes we have envisioned in this chapter, we must change some of the laws and traditions which apparently are blocking educators. Most states still have a magic date; in some the magic date is October 31st. If little Sally is born at 11:59 p.m., October 31st, she is eligible for kindergarten when she turns 5. But poor little Janie isn't born until 12:01 a.m. on November 1st; she is not eligible for kindergarten when she turns 5. Something has happened; the genes have gotten mixed up in that magic minute or two. It is tragic, utterly tragic, that with all the knowledge and resources and research educators now possess that we still determine a child's education and possible future by one minute on the clock. How much longer are we going to continue to tolerate standards that are based upon centuries old educational theories which are not validated by any research? How much longer are we as educators going to promote and continue to rely on traditions and rituals based on ignorance and speculation?

If we do all the things discussed in this particular chapter, we are going to have excited students. These excited teachers and students are going to take off on that rocket toward the educational moon.

Perhaps what has been said in these opening pages is that if we all dream, if we as teachers, students, parents, administrators, college professors, and state department employees all work together, if we finally do ignite the rocket, we really can take the lid off the old educational pot, and truly develop the new kind of school envisioned in this chapter.

Chapter 2

CHALLENGING CURRENT PRACTICES

If we accept the assumptions, criticisms, and suggestions made in Chapter 1, then it becomes obvious that no school in America is the kind of school we should have--that no school in America is the kind of school we can have--that no school in America is the kind.of school we know how to create.

No school in America has put together the 63 or more changes, improvements, elements, revisions, and renewals that are now available for schools to adopt; one possible list of these 63 is developed in Chapter 8. Each individual educator and each school staff must compile their own lists. What revisions is each person or each group willing to accept? Whether they are subdivided as 63, or only 6, or maybe as 106 changes or elements of change, or whether they are not labeled as new, or innovations, but only renovations of old ideas or practices is not the important issue. The critical factor is that we must recognize that if we are going to have better schools, each staff must consider the acceptance and implementation of different approaches in an effort to truly provide a challenging, relevant environment for boys and girls.

The so-called innovative schools in the United States today are not the kinds of schools we are capable of having because they have adopted only some of these revisions. Not one school in the United States has adopted all the exciting possibilities available to students and educators; schools which are coming close are not yet able to point to successful implementation of all the presently known potential improvements. And the tragedy is that these ideas are rapidly becoming obsolete as we look at education in the 70's and 80's; thus, the acceptance gap between need and potential, between present and future, becomes even greater.

One of the reasons we do not have an excellent school yet is that educators have been slow to recognize, that in changing schools, they cannot make only one or two or five or ten modifications. There has to be massive change if there is going to be significant improvement. The adoption of a few "innovations" is only a step in the right direction. Until we put together all the wonderful new concepts about individuals and learning, we are not going to have the opportunity to truly develop a significantly different kind of a school and thus, hopefully, one that is significantly better.

Neither is it going to be possible to evaluate whether all the proposed changes actually will provide a better education until some school in America puts all the 63 or more practices into operation effectively; when someone finally does, we must then properly evaluate the program to try to determine if it is significantly better and does present one model of the kinds of schools we ought to already have now. With the slow progress in education, by the time we get a school operating effectively with the current notions, it will be time to destroy that program in favor of an additional 20 or 30 ideas which will be developed in the next few years. Unfortunately, schools throughout America will just be in the process of adopting the old "new"; and we will again have a time lag in trying to adopt the new developments yet to come and ones that will certainly be even more valuable than those we are trying to implement in the present schools.

If we are to develop a better kind of school, there must be a planned process for change. One suggested method is for the staff of a school to follow eight general guidelines--a procedure involving a cycling of stages considered necessary for successful implementation of change in an individual school or school district. These suggested eight guidelines form the backbone of the eight chapters in this book; they are briefly summarized below.

The first stage or step for any staff involved in innovation is to make sure that as individuals and as a group, they have done some dreaming--that they have envisioned some possible changes, as we did in Chapter 1 of this book. Stage two forms the basis of this chapter, that of challenging the current status of both "conventional" and "innovative" schools. Each person must ask, "Are we really dissatisfied with present programs? Aren't they operating effectively? Aren't schools doing a good job? Haven't they done so before? Are the schools which label themselves 'innovative' really doing a better job? Is there a need for the 'innovative' schools to change? Are we as a staff in this school really dissatisfied? Do we think we can improve if we adopt dramatic changes?" As educators we must challenge the whole concept of change, and we must challenge the practices that are now going on in BOTH the conventional and innovative schools.

As many educators throughout the United States have done this soul searching, as they have challenged the status quo, they have become very dissatisfied. Generally, these individuals feel that schools could not be worse, when compared with what we should be doing, and with all the current knowledge and resources and the ability of the United States to put a man on the moon. More educators must question the total efforts and accomplishments of the schools. If the educators in a school are not really dissatisfied, successful change will not occur.

The third stage is to develop a rationale for a new type of school; educators need to wrestle with the advantages and disadvantages of the basic philosophies of different programs; they must ask, "Does this honestly appear to hold possibilities to make schools much better than they are now?"

If the first three steps convince the staff that they ought to proceed toward developing a different and better education, then stage four should plan change--the staff should draw some tentative blueprints. This planning leads to stage five, organizing for change; here the staff and structure of the school is re-deployed to provide the potential to accomplish the task. In stage six the staff actually begins to specifically create each of the revisions planned during the first five stages.

Stage seven calls for evaluation; once the revisions are in operation, the question remains: "Is the school really significantly better?" Stage eight calls for reflecting. If all the changes provided for in the first seven steps are successful, then what? Hopefully the changes have led to a significantly different and significantly better school; do educators stand still again or do they look toward the future? Or what, if after all the changes are evaluated, the staff finds in reflecting that their "innovative" school isn't doing any better than the traditional ones? The easy answer is to return to the old; the pioneer spirit is to try other new ideas or improve what went wrong with the first effort. The dissatisfaction is still there.

Unless a school district is prepared to cycle and re-cycle through the stages of envisioning, challenging, rationalizing, planning, organizing, implementing, evaluating, and reflecting as related to their current educational programs, or follow another similar system of analyzing their current efforts, chances for successful change are limited. If a school is willing and ready to accept the challenge of change, perhaps the comments which are to follow may offer some guidelines for improvement in schools and school districts.

One of the reasons that the so-called innovative schools have not been any better than the conventional schools in most cases is that many of the innovative schools have often overlooked, and the conventional schools haven't even started to realize, that in changing a school, besides considering cycling through eight guidelines, that during each of the eight stages, there must be plans for revolutionary changes in the six basic components of the school: philosophy; learning and instructional methods; curriculum; structure and management; facilities; and individual and program progress reporting. Teachers must think of individual students first, not basic skills and content; the affective and psychomotor domains must rival the cognitive. No longer can teachers stand up in front of the class and talk to the students day after day. No longer can they rely on the textbook; no longer can they permit patterns which call for period one, period two, period three schedules in the high school; no longer can teachers be content with the egg crate cracker box which is so prevalent in most of the school buildings in America; no longer can they insist on the traditional examination given to the entire class. Schools which are going to improve must change these six interrelated, yet separate, components; all six are affected--one cannot be changed without eventually leading to revision of the others.

As innovation in the schools of America is subjected to analysis and evaluation, there are emerging two basic kinds of changes: those referred to as nuts and bolts or organizational gimmicks, and those related to the individual teaching of each student and the instruction received by each--or sometimes called the essential parts of change. Many of the "innovative" schools have adopted the so-called gimmicks; they have team teaching, independent study, flexible scheduling, new resource centers, doughnuts in the student center, and open pod classrooms. They thought these were going to make their schools much better.

On the other hand, some of the "innovative" schools have adopted what they thought were the essentials. They were not going to fool with the gimmicks. They were going to concern themselves with the real issues related to how children learn. They were going to prescribe and diagnose; they were going to offer individualized instruction. They were going to be concerned with the needs and interests and abilities of students. They were going to be concerned with motivation, self-image, and environment; and they were going to look at each child as an individual patient. Neither pattern has led to the development of the school for which we are all searching.

What has developed, as schools have begun to change, is a realization that both approaches must be pooled in an interrelated effort; in other words, team teaching, resource centers, independent study, flexible scheduling, doughnuts, and other, are essential parts of the new kind of a school. But so are the concepts of diagnosis and prescription, needs and interests, individualized instruction, and personalized programs; we must put together both the so-called "gimmicks" and the so-called "essentials" if we are going to have self-directing students and a school flexible enough to meet the demands of each individual on a daily basis.

Do all schools need to change? Is all of this innovation hullabaloo really essential? A part of challenging change is to come to the realization that the present schools fail. They lack the capacity to respond to modern day challenges. Most schools in the ghettos are just now learning what to do with the children who come to them each day. Obviously, much of the problem is in the community itself; but until recently, some of these ghetto school districts were using Dick and Jane and stories about the farm and grandmother and grandfather. The suburban and rural schools have not done much better.

Schools have failed because they have made the assumption that if a child is failing, it is the fault of the learner; and usually the case is just the opposite. In the majority of the situations, the school has been in error, not the individual. There are always those the school cannot reach; but with a relevant program, tremendous gains have been possible. The previous traditional prescriptions to correct the imperfections which we have admitted and have tried to do something about have had little payoff. We have had discouraging results from compensatory education. For example, we are just beginning to solve the problem of remedial reading classes.

There has been an inability of the sub-systems to overcome various problems. The model schools have not developed programs that could be adopted nationwide as part of the answer to improving education. Schools that have become involved in total reorganization and have developed different kinds of programs still have yet to show convincing evidence that the rest of the schools ought to move in that direction.

One of the reasons why we haven't done a better job is that we have failed to recognize a philosophy of alternative educational programs. At this writing, we do not know what really is the best kind of a school, if there is, or ever will be, a "best kind"; and yet most educators will not admit this. We pretend that "our" school is the best, or at least is good, or that we have the answers. Or even if we admit that we have some problems, we state that overall, "We have a good school; we are working to try to correct the deficiencies." Thus we have argued as to whether we should keep the conventional classroom or move to some completely upside down kind of a school. Both schools of thought are wrong, based upon current knowledge.

There is absolutely no proof or evidence of any kind that the conventional school as we know it today--the self-contained classroom, the single textbook, group-paced instruction, report cards, bells, room libraries, and all the rest of these practices are the best way to run a school. On the other hand, we have no evidence yet that adopting all of the proposed 63 changes, including team teaching, flexible scheduling, non-grading programs and new curriculum materials, the concept of student freedom and individualized instruction, and all the other 57, make the school that much better. We do have some dissatisfactions; we do have some evidence that for most students the conventional practices need to be changed, and we do have some evidence that some of the practices in new type schools offer great potential for the future.

What we can say, based upon current research, is that in every community, students and parents and teachers ought to have a choice as to the kind of program in which they desire to participate. Probably there ought to be some schools or some rooms, depending upon the size of the school district, which are still somewhat self-contained, with report cards and fairly conventional programs, because some students and some teachers and some parents still seem to operate more effectively in that environment now.

There ought to be some schools or rooms in each community that operate as a mixed program. Part of the school should be upside down, and part of it should be conventional. In other words, perhaps this school might have some team planning, some self-pacing, some new resource centers, but still have some vestiges of the old in terms of textbooks, recesses, a traditional schedule or whatever.

But in every community, there should be at least one school where it ought to be possible for parents and teachers and students who want to work in an upside down kind of environment to have that kind of environment. There ought to be at least a guarantee that from Pre-kindergarten through 12 a student could be in a learning situation where he could be involved with all of the changes and innovations in education. None of the school districts in America have provided this kind of alternative for teachers, for parents, and for students. They have forced all of the students to go to either a semi-flexible kind of school, because no school is completely flexible yet, or they have forced them to stay in a self-contained room or conventional school.

One false notion that districts have followed is that before they change, they must have close to 100%, or at least a strong majority, in support. This is far from the truth. They should not wait for 100% of the community to agree on the kind of school they ought to have, because they will never agree to the tune of 100%. They should not even wait for the majority, for if they leave the schools conventional, those who believe in an upside down school have to send their kids to the conventional school; and teachers have to teach in that kind of a school, even though they don't believe in it. On the other hand, if all the teachers and all the parents are forced into the upside down kind of a school, they don't do a good job. They don't accept it wholeheartedly; they fight it, because they do not believe in the kind of educational program being offered.

Therefore, until we have further evidence or further proof as to what is the best kind of school, we have to be experimental; every community in the United States has an obligation to offer parents, children, and educators a choice while we are attempting to find solutions. In every district there should be, for example, one conventional school, one semi-flexible school, and one completely upside down school.

If there is trouble in selling this kind of philosophy in the community, ask the opponents, "Don't you believe in motherhood and apple pie and patriotism?" The American dream calls for choices; we should not be forced to accept only one way. We should not be forced to accept monopolies, and yet in most communities, the schools are examples of some of the most horrendous monopolies ever developed in the United States. There are school districts in America where they have six elementary schools, and all six elementary schools are basically the same. They use the same textbooks, the same materials; they have the same supervisors; they have the same general philosophy; and teachers are hired to operate within the confines which have been set up as the district elementary school philosophy. If a new parent moves into that community, and that parent does not accept the kind of school that is replicated six times, that is too bad. They have no choice but to send their kids to a school in which they do not believe; if they refuse, they must fight the power of a "police state" situation; they must go to court and face a battle to try to say, "I do not want my children in those kinds of schools, and I am not going to send them there." In almost every case the parent loses; they must pay a fine and lawyer fees; and the students are still dragged off and forced to go to a monopolistic school, attendance at which is even determined by the side of the street on which a home is purchased.

How, with dreams and visions of better kinds of schools, and with freedom and democracy and tolerance and justice and understanding and apple pie and motherhood, and all these things in which we believe, can we say to teachers and parents, "You must send your child to that school; you must teach in that kind of a school; you must participate in that kind of a program, even though you do not believe in it; if you don't as a parent you can go to jail; as a teacher you can lose your position."

Yes, it is true decisions must be made and that children need an education; but is there anything wrong with offering choices, especially when we must admit that currently we do not know what constitutes the best kind of school for all boys and girls. If we give parents and teachers choices and allow them to operate within wide extremes of philosophies and beliefs, we can come very close to providing the kinds of educational programs for boys and girls in America which seem to be best suited for that particular student, teacher, and parent at that particular moment in time. Perhaps one day we will know what makes a successful school and a successful teacher, but we do not know now; we only have a few facts and a number of guidelines. We must challenge the kinds of schools we have, and we must search for significantly better and different kinds of schools. Evidence of the need for this challenge will be presented in later chapters. In the meantime, a basic KEY in changing schools in any community is to provide OPTIONS for students, parents, and teachers. Any district can change if there is no attempt to force everyone to accept and participate in the new programs. Report cards, for example, are easily eliminated for the majority if parents are given an option; those who want them receive them, while those who do not are able to escape A, B, C, D, F evaluations.

One of the reasons that we have developed the middle school in the United States is that of dissatisfaction; we have challenged the success of the junior high. We have said the current grades 7, 8, and 9 now constituted in most districts in America--the curriculum, program, philosophies, regulations, that we find in most junior highs--have failed to produce the kind of program we first envisioned when the junior high was basically developed; it was an innovation at one time, but it is no longer the kind of school we ought to have for boys and girls ages 11 through 15.

Is the middle school a much better answer? Is the 4-4-4 plan better than the 6-3-3-, or is an educational park, pre-K through 12, better, or 6 through 9, or 5 through 8; what is the magic answer? Obviously, we do not know for sure what is the best organizational pattern in a school; but we do know that the present junior high must be changed. The exciting thing about the middle school is not that it has grades 5 through 8, or ages 10 through 14, if the school district has eliminated grades as they should; the exciting thing about the middle school is that it presents an opportunity to start all over again. We can say, if the current 5th, 6th, 7th, 8th grade programs are not appropriate for boys and girls ages 10 through 14, then what kinds of programs are. In other words, with all the knowledge and resources and research and money and talents and time, we now have, here is a fantastic opportunity to forget all the traditions and all the past ways of doing things and develop what could be the most exciting school years in American education. Yet most middle schools across the country are continuing to adopt many of the practices which were unsuccessful in the junior high, merely because of tradition and because they are afraid to move too far along in the change process.

We must challenge the concept of the junior high; we must also challenge the reasons middle schools have started in some communities. Many have adopted a middle school because they built a new high school to house 9 through 12. They merely moved the self-contained 5th and/or 6th grade into the building and left the 7th and 8th programs basically the same. But whether it is called a middle school or a junior high, the important thing is what is happening to boys and girls in that setting. How can the middle school be better than the junior high if both programs still have a "7th grade" and in that grade require English, history, math, science, physical education, and one semester of art and one semester of music? Usually the old junior high and the new middle school in the same district are teaching the English course based on a similar district curriculum guide. And how much longer can we tolerate communities building new high schools and dumping the junior high students in the old high school building.

Why don't the new organizations include pre-kindergarten; certainly there appears to be value in 3- and 4-year-old programs. And what about junior colleges? Should not the new organizations include nursery through 14, not just kindergarten through 12? Preferably, schools should not be divided into elementary, middle, and high schools. How does one decide to cut off the 5th grade from the 6th grade, or the 8th from the 9th. A number of exciting programs are now developing in pre-kindergarten through 12 parks, where all the students are housed under one roof and are intermixed in the halls, student centers, social activities, and classes. The division is determined by individuals, their interests, and their personal development, not by arbitrary divisions imposed by administrators and school boards. Directors of such pre-K through 12 complexes, some of which are on or near college campuses, finds the non-graded, continuous concept so exciting that it would be difficult to return to any other kind of structure. However, if schools are already built in arbitrary divisions, as most are, the school then has the responsibility to provide a continuous program for all enrolled. This means that the present 7, 8, 9 junior highs must provide for students individually working at levels ranging from the old grade 3 through grade 13. In conventional buildings in districts, by devising overlapping "grade level" teams, such as K-4, 3-6, or by overlapping schools within a district, individual needs can be better met.

Money can be made available if the public is convinced. Schools should be community centers, open 12 months a year, 7 days a week; but adopting new organizational patterns, such as twelve-month schools where students need to attend only the current total time, does not necessarily lead to better educational programs. Again, the need to challenge the concept of change in American education.

Why are change agents so insistent about this challenge? One reason stems from visiting numbers of buildings around the country that are called innovative schools! As one example of what the visitor discovers, these "innovative" middle schools are often still giving report cards; there is no reason for report cards in grades K through 8. Most of the present middle schools are really no better than the junior highs one can visit throughout the country. As a true illustration of the problem, recently in one middle school a piece of paper was taken from the trash can in order to write some notes. It looked clean, at least on one side; but in turning it over, there was discovered a big red "D" at the top of the paper. It wasn't even in green or blue or black or gold or some other perhaps more "innovative" color; it had to be red; the paper was entitled Experiment 2, and signed with the name Wally at the top. It was neatly written, although the margins were not exactly correct.

Wally had written, "What we wanted to know; we wanted to know if the second bulb goes off if you shut off the first bulb." The teacher had written an exciting note again in red ink; "what kind of an electric system is this?" A very exciting kind of question for Wally. Wally continued, "What we did; we took two bulbs and connected them to a dry cell battery and shut off"; and here the teacher had to interject with a "how" and a question mark in red pencil--another intelligent question by the teacher. Wally continued, "the first bulb and found out that the second bulb turned off to"; and the teacher again used her talents and her time and her efforts to make an exciting kind of observation on Wally's paper; Wally had spelled too, "to", so she neatly added in another red "o" and a period. Wally continued his next and final paragraph, "What we found out; we found out that if you turn off the first bulb, the second bulb will go off, to." Here the teacher had tired; she had failed to add the other "o" to "to." But at the bottom the teacher had written a big red "why" with a question mark; and at the top of the paper, she had given him a nice fat red "D".

Now, why in the world would a school continue to give Wally a "D"; he was an 8th grader traditionally. There was no need for a report card; there was no need to give him a "D"; there was no need to write these wonderful comments in red ink; it was a waste of the teacher's time and a waste of Wally's time. He neatly dumped it in the wastebasket as most Wallys do, and all this succeeded in accomplishing was to further Wally's negative self-image and confirm that he was not successful in his school ventures.

The principal of that school was asked about Wally; what had he accomplished last year in the conventional program? The answer is what you would expect; Wally was not successful; he was a discipline problem, got poor grades, and wasn't excited about school. The principal was then asked what happened to Wally this year now that the school had flexible scheduling, team teaching, non-gradedness, a new middle school concept, and supposedly individualized instruction. The principal's sad comment was that, unfortunately, nothing different had happened to Wally; he was still pretty much the same kind of student that he was in the conventional program last year. In other words, all the changes, all the gimmicks, and all the time and effort that had gone into supposedly making this a better school still found Wally failing to find success in his everyday school experiences.

One of the reasons why Wally has not found more success is that we have really not become professional in education. We are still involved in group diagnosis rather than individual diagnosis. Turn for a moment to a doctor's office and pretend that 25 patients are sitting in the waiting room, each with supposedly individual ills--a broken arm, appendicitis, pneumonia, or whatever it might be. Dr. Jones walks out into the waiting room and says, "Oh, I'm sorry to see all of you here today; some of you seem to be frowning; well, we can take care of all the problems; it's obvious as I look over the group of 25 sitting here in the waiting room that you all have a common ailment--you have the flu. We can take care of that quite easily; all of you line up for flu shots; at the end of three days come back and we will evaluate you to see whether or not the shots have cured your flu." How long would we tolerate M.D.'s operating this way in our community? We would run them out in about five seconds; we expect individual diagnosis and treatment.

Now shift gears back to another waiting room, one of the "my rooms" of the high school. The teacher walks in and looks at the students and says, "Oh, isn't this going to be a wonderful year. We are all going to sit here for 180 days, 55 minutes per period, 36 weeks this year; and we are going to have an exciting time, the twenty-five of us working together. What, I can see some of you are frowning; I'm sorry; let me see what is wrong. This is 10th grade English. Let me dust off the curriculum guide (which was usually written several years ago and should have been burned before being printed). Oh, I see your problem--don't despair, I can help; it says 10th grade students lack an appreciation of literature. We can solve that problem; all of you open your books to page 22. Yes, the green book; yes, page 22; yes, that is the story, *Silas Marner*. Now we are going to read *Silas Marner* for the next three weeks and discuss it in class; and then we will have a test. After you have studied *Silas Marner* and had your test, all of you will be cured from this problem called lack of appreciation of literature." "What, you failed *Silas Marner*--don't give up--in our school we always give you a second chance; open your books this time to the blue book. Yes, that is it; we are all going to read together that great piece of literature called *Julius Caesar*. Do not worry that some of you are reading at 4th grade level, and some of you are reading at 14th grade level. You are all in the 10th grade so you should all study the same textbook, read the same story at the same time, have the same exam, even though some of you cannot understand it, and some of you may be bored because you read it by yourself two years ago. What, you failed *Julius Caesar*--well, do not despair. In America we believe in trilogies; you always get three chances. Open your brown books this time; yes, that is it--*Tale of Two Cities*."

Some schools have gotten innovative and have substituted *Treasure Island* for *Tale of Two Cities*, and some are really in trouble because they substituted *Lord of the Flies* for *Treasure Island*. "What, you failed *Tale of Two Cities*. Don't quit yet; we have another wonderful opportunity in store for you. Because you failed to appreciate literature this year and failed 10th grade English, you get to repeat 10th grade English again next year and read the same three pieces of literature again." Conventional educators say that this is an exaggeration, but all one has to do is visit 10th grade required English classes all over America. If it isn't *Silas Marner*, it is still some other group-paced requirement; schools which have ability tracks or some type of "homogeneous grouping" only make the matter worse. How much longer are we going to continue to tolerate this kind of diagnosis in education?

What we are talking about is the fact that we need to individually diagnose and prescribe for each child; we need to offer alternatives in terms of programs for each child based upon individual needs. The doctor checks each patient individually; he often calls for help from another specialist. He calls for help from his aide, such as nurses and X-ray technicians, and for blood tests in the laboratory. In other words, he not only individually diagnoses and prescribes and uses his own judgment, but he uses the judgment of other professional doctors and nurses and the results from laboratory and X-ray techniques. Yet where are we as educators? We are still determining the patients' prescription before we ever see them, before they ever enter 10th grade. We say that all 10th graders next year certainly need to read *Silas Marner*, because the curriculum guide says they need to appreciate literature so order a book for each child so that they may read and discuss as a group for they all have the same deficiency. We never do individually diagnose and prescribe for Sally or Henry or ask whether or not *Silas Marner* is the appropriate tool for each individual.

Wouldn't it be a sad state of affairs if M.D.'s planned that next September the first twenty-five patients to come into their offices would be classified as those who have appendicitis problems, and all twenty-five would receive the same operation? Yet, in schools we decide in the spring that all incoming 10th graders need the same curriculum in the fall; and the tragedy of all this is that we haven't even met the transfer students. However, it does not matter; we already have a book for them.

If we get involved with psychodiagnostic evaluation of some of the problem learners, which we must do more of than we have in the past, we find that students have problems in the cognitive, affective, and psychomotor domains. Most of the problem learners, ironically, have difficulties in the affective or psychomotor areas; they need a personalized program; they need to improve their self-image, find success, change their concept of life; they need a little love and affection; they need a teacher who perceives and who understands psychological influences on learning. They usually have failed to receive the proper perceptual motor training in the early years.

But what do we do in most of the schools with problem learners? We put them back into more cognitive structures and give them more requirements; we say if Johnny cannot read or if Johnny does not like math or does not do well in those subjects, then the answer is to give him more math and more reading and more requirements, even to the extent of taking away psychomotor or affective domain development areas. We take away some of the so-called frill subjects like art, music and physical education so that he can spend more time with reading and mathematics; and we take away sports and other curricular activities of this nature through ridiculous eligibility rules. This just merely increases the problem of the child in most cases.

We induce negative self-image and perpetuate it for many of the students. What a number of them need is empathy and sympathy from the teacher; instructor perception must be different. Some students may need two hours of individualized reading, two hours of art, an hour of physical education, and an hour of responsibility time at a given moment in his or her development. But do we allow that? No, because the magic requirements and schedules arbitrarily set by administrators will not permit this kind of personalizing.

Take a look at the tragedy of some of the Indian students. Many of them score below "normal" on a verbal test but score above average on a non-verbal test. Many of the Indian students come from families with incomes below $2,000. We classify them as stupid and lazy. We talk about the problem of alcoholism among the American Indians, but what do we do about it? Do we give the Indian classes in Indian aesthetics; do we point out the beauty of their ceremonials, crafts, art, poetry, and dances? Do we enhance the wonderful culture and heritage from which they have come? Do we point out in Indian history classes that Custer probably deserved what he got? We talk about glorious cavalry victories but Indian massacres. Do we talk about current Indian affairs and problems in classes? Usually not; rather, we attempt to make the Indian child submit to the culture of middle-class white suburbia; and as a result, many of the Indian students suffer from negative self-image. These same descriptions apply to other problem learners and to other minority populations as well as to a number of the Indian students.

This is not to say that all Indian or minority students have these problems. Most are fine individuals, and many of them do an excellent job in school; but as we work with the ones who have problems, we are really forced to ask, "What are we doing to correct the errors we make in most of the schools in America today?" We are not doing what we should with any of the minority groups who are having difficulty; the same statement applies to most of the problem students, from a minority or not. We do not have the answers; and yet, by pretending we do, or conveniently excusing the situation by a lack of time or a lack of money, we continue to perpetuate the difficulties of the problem learners.

If we would only listen to kids. The students will indicate what is wrong with the schools, and they will indicate what kinds of programs we need. The schools that have begun to do this have had rewarding experiences. Some Indian philosophies, for example, say, "If you do not understand my silences, you will never understand my words." Why do some students remain quiet in the classrooms? Could it be that they have a fear of being laughed at for one thing or that they do not want to answer after another has failed and perhaps embarrass that other student? Could it be that they are afraid of being too right or too wrong in some situations? Some cultures teach the child to be quiet and listen; some are taught not to shine to the extent that others will criticize them as being too goody-goody. What some of these students with problems need is a teacher to talk to; we arbitrarily assign teachers and say to the student, "Go here, go there." If the student and teacher do not get along, it is usually the student's fault. Have we gotten to a point where students can select a teacher to talk to, where the students talk about themselves and things they know the best? Do we really show a genuine interest in each individual student, or do we pretend that we do and then put them into the mill of standard requirements and group procedures and diagnosis every day at school?

We talk about culturally deprived students. There are none, but there are some who may be culturally different. If some tribes of Indian students playing basketball are asked what the score is, the questioner might ask all afternoon and never find out because they do not care. Yet, watch some groups of middle-class Caucasian boys from suburbia; every five minutes they are arguing about the score. Even in a game of scrub pickup in a local neighborhood, competition becomes very important.

These types of differences can certainly cause cultural barriers--a real lack of communication. If we are to truly understand individuals, we must finally admit that many students in classrooms may certainly need different programs and different understanding. In one of the big cities recently the topic of a speech was the problem of students being culturally deprived; and, of course, again the answer was that they are not culturally deprived but may be culturally different. It was pointed out that if a stranger went down to X Street and Y Avenue in this city on a Saturday at midnight, the stranger would be the one to be culturally deprived, or at least the one who was culturally different. If the stranger could not understand the culture in that community, he might be in serious trouble at that particular time of night and on that particular corner.

When we challenge the need to change some of the practices which have been discussed in this chapter, we must remember that we are not just talking about minority groups or problem children. We are talking about the need to individualize programs for all children--tall, short, fat, thin, pink, green, fast, slow--it makes no difference as to their background, other than recognition of the fact that usually the individual's frame of reference and self-image make mandatory individual prescriptions.

Further, we are talking about all schools--suburbia, rural, and inner city. We must challenge schools and their programs in all settings. Schools cannot continue to have confining acres or fences. Students can no longer continue to enter at 8:30 and be gobbled up in the walls of the school and not leave until 3:30. Schools cannot close at 3:30 or 4:00. They must be open seven days a week, 24 hours a day in most communities; students, in addition to using the school, must use other community resources, and the parents must utilize the schools. Some schools are beginning to contract out to private agencies for instruction. They might, for example, contract out with a local reading laboratory a certain amount of time in which this laboratory works with designated students who are having reading difficulties. Usually, in these cases the private agency can do a better job than the school because the agencies are geared to handle this problem; their existence depends upon the volume of clients and their ability to succeed with these kinds of problems. Their only profits come from this kind of instruction; if they are not successful, they will soon be out of business. These are the kinds of agencies that might be used to tackle some of the immediate education problems.

Look at the use of potential school community resources. Why is it that we have to have art classes always at school or animal classes at school? Can't the animal classes be held at the local zoo? Can't the art classes be held at the art museum at least part of the time? These are not original ideas; some communities and outstanding leaders in education have long advocated and have already implemented these kinds of programs. In this chapter we are just trying to draw together some of the practices which are challenging current notions about schools.

Why can't, for example, students from school A and school B meet at the zoo to learn together. We have the problem of racial imbalance in certain cities. Part of the difficulty as related to schools is that we insist on the neighborhood school and the fact the students must spend all day within the school walls. Why couldn't 30 students, from neighborhood A which is perhaps an all "white" neighborhood, and 30 students from neighborhood B which is perhaps an all "minority population" be sent to the zoo together? Here they form a class of 60 with two teachers and perhaps the employee at the zoo, parent volunteers, or teacher aides. In other words, perhaps four or five adults can work as a team with these 60 students to teach them something about the particular animals that they are visiting at the zoo on that particular day. Here is an integrated class working together outside the school walls. It helps to lessen social problems and the school racial situation. Both groups are bussed; it is probably a much better learning experience to have students study animals in the zoo with all kinds of resources available than to have them sit in a classroom reading a book, looking at pictures, and perhaps discussing with a teacher who knows very little about the type of animal they are discussing.

Why can't students spend a week working at the local hospital or all the dozens of other places in the community. Obviously, not all communities have zoos, art museums, or hospitals; and the weather, size of town, and number of students place limits on the practical application of these ideas. However, some of it can be done in each school district. The important concept presented here is that of getting the students outside the school walls more often than the half day field trip once a semester.

Consider, too, the classes held within the walls, especially in the light of the twenty-first century. Is the content that students are learning really that important or that relevant? Probably 90 per cent of the content now being taught is irrelevant when considered in the light of the twenty-first century, and especially if the medical scientists are correct in predictions that some of the current seniors will live to be 100 years old, and that some of the current kindergarten children may live to be 125 years old. Many of these kindergarten children will not go to work formally until age 25, will work only a three or four day week and will retire at age 50. Are the kinds of programs that we have in the schools today designed for students who are going to live in the world of tomorrow? We can no longer say, "Well, that is way off in the future; we will worry about the twenty-first century when we get there." These students who will live in the twenty-first century are already in school, and their programs must begin to be geared for a different society. Suppose the current kindergarten children do not learn anything until they are 30 years old. They still have 70 to 100 years in which they can learn all that we learned in the 70 years we had when we came upon this earth. What are these students going to do from age 50 to age 125? They will have 75 years of leisure time to twiddle their thumbs because we have not provided opportunities for them to do anything different. What are they going to do on the non-work days of the three or four day work week? This is one of the tremendous questions and one of the tremendous challenges in this world of change. What is really important to learn for now and for the future and for students currently in school who may be alive in the year 2050?

Many of the leading educators are saying that perhaps the expressive subjects--art, music, dramatics, creative writing, foreign language as a recreation, recreation courses themselves, and industrial arts--are really the important subjects for many students. In schools are we going to continue to deal primarily with the instrumental subjects of math, science, social studies, English, and foreign language taught as an academic exercise? Even now, most of the population is working only 35 hours a week; yet, about 15 per cent of the population is averaging 55 hours a week. It's an unusual situation when a few put in 55 hours a week so that the many may work 35 hours a week. There has been a tremendous change from the years when the so-called blue-collar workers worked long, long hours so the few white-collar workers could enjoy more of the luxuries and time off. Many of the things we are now teaching in math, science, and English are not of value to current students, nor will the content be of value in the near future. Perhaps art, music, dramatics, and the expressive kinds of subjects will be the most important that we can offer to a great number of students. Certainly many of the students need more than we offer in these areas in current schools; we cannot really justify the old "academic" requirements for all students for college admission or high school diplomas.

Many educators can dwell upon their own personal experiences such as attending a self-contained elementary school where they never were fortunate enough to have really outstanding teachers in the areas of art or music. Many, as students, were not too interested in those subjects anyway and, therefore, never developed much skill or talent. They finally got to the 7th grade where it is common to find weaker teachers in required 7th grade art and music. They disliked the teachers and the courses, so they rebelled and received D's in both courses. Their experiences in art and music in the 7th grade were so horrible that never again did they choose to take an art or a music class. They often go through five more years of secondary school, grades 8 through 12, four years of undergraduate college, and four more years for the Ph.D.;--thirteen years of high school and college work--and never once do they take an art or music course. Why? Because society said these things were not important. They were required to take, over and over again, English and history courses, and mickey mouse education courses. The strict required curriculum and traditional methods of teaching really have proven to be of very little value to many; and yet, never were they required to take anything in the area of the expressive subjects, except for a little physical education which was poorly taught. In high school most were even excused from that because they were members of the athletic teams; and now these students are school administrators and parents.

Further, the courses in 7th grade art and music are often so poorly taught that who would ever volunteer for another. If one wants to see horrible education, generally speaking, visit 7th and 8th grade required general music classes. The 7th and 8th grades are supposed to be exploratory and elective and exciting; and yet we require students to take English, social, math, science, physical education, and/or art/music, and/or shop/home economics. If they do not do exactly as the teacher says, they flunk and are told that they are terrible students and did not do what they were supposed to do. In art and music, for example, even though they were designed supposedly to help students find a place for themselves as they explore their future, if some students do not like a teacher, do not like working with clay, or cannot sing in tune, they get D's or F's or unsatisfactory notices in these exciting exploratory years of their lives. And what research indicates that all students should have two semesters of math and only one semester of art?

What really is important to teach in terms of current knowledges? If the eight-year study during the 1930's had any value and if the experiences we had with the GI's returning from the battle field in 1946 and entering college had any significance whatsoever, then we certainly should know that college success does not depend upon the magic requirements of most high schools. It is possible for a student to skip those wonderful algebra, English, biology, and world civilization courses and still go on to college to become doctors, lawyers, astronauts, or whatever other criteria we want to apply as having found success in the academic world. And how awful that word "academic" is as used in schools. We differentiate between the so-called important academic subjects and the so-called less important subjects--"the frills and the non-academics." We know that students can take four years of basket weaving in high school and still go on to college, find success, and get good grades, if grades are the criterion. The important thing is that the students find success, develop positive self-images, find that learning is fun, learn how to tackle situations, become self-directing and responsible, and learn to make decisions and value judgments. These are the kinds of things that seem to make a difference in terms of success, not only in college but in the world of work and the world of home. Therefore, what should we teach, and how should we teach it? What evidence do we really have to support that what we are doing now is the correct way?

And look at the so-called curriculum innovations. Most of them have been improvements over the past; the materials have cut out some of the less important information, but we really have not come up with exciting innovations in the area of curriculum. We haven't developed criteria for assessing the pre-packaged curriculum materials that are now on the market, although groups are working on them. We really haven't developed curricula that allows schools to teach critical thinking and creativity or to develop these traits in students to an extent that we can say, "Yes, we are doing these things for boys and girls." We have not developed many courses that really spell out behavioral objectives; and we have not come up with evidence yet as to what extent, if any, that spelling out behavioral objectives makes a difference in terms of the final student product when they graduate from school. We really have not determined the role of humanities or the behavioral sciences in school programs, let alone properly defining them. BSCS biology, as an example, is 100 per cent better than the biology programs that were in vogue prior to BSCS; and yet, that program, even the second edition, is so badly in need of change and revision. It is still group paced and discipline centered; we have only taken a step forward. We really need to challenge what we are doing in the world of curriculum innovations.

How many of the new programs are taught on an interdisciplinary base? We keep saying that knowledge is interrelated, yet we keep teaching as if there were no relationships whatsoever. In most of the schools we still try to teach at least twelve or more subjects as separate entities: communicative arts, theater arts, music, art, foreign language, social studies, industrial arts, home economics, mathematics, science, physical education, health, business, and other such departments.

Perhaps it is time to narrow the curriculum to two or three general areas. One might be, as an example, called communication. We might discuss such concepts as man and beauty. In a course called interaction we might study something like man and society or the effect of war on an individual nation. In the course called environment we might study topics such as man and nature and man and universe, or we could teach humanities, sciences, or unified arts. There are many ways to attack the problem; but rather than continue to teach twelve isolated subjects, we should find several alternative ways to interrelate the curriculum in a much more meaningful program for boys and girls. The concepts could be taught by learning teams of teachers, which could be reconstituted whenever necessary. They could change for each concept, every theme, every semester, every year, or whenever it seemed best. There would be ongoing change in the curriculum. Only a few schools have begun to change in terms of interrelating knowledge. Even beyond this should be only one curriculum--all interrelated. It is difficult to do now, so perhaps some merging will help schools move in this direction. A better way is to have students develop their own interrelated courses where the material makes sense to them and where teacher teams and personality matches can thrive. Curriculum centers are established and then mergers are accomplished through individual or small group courses which are planned to meet a felt need (see Chapter 5).

Some schools have been very successful in merging the following combinations: Expressive Arts (the old English, art, music, and foreign languages); Environmental Studies (the old science, physical education, social studies, and health); Technological Systems (the old mathematics, business, industrial arts, and home economics); and Developmental Programs (the old early childhood and special education). This combines the former academic and non-academics, it balances team numbers, it relates subjects with common pursuits, it forces the teams to overlap (math and science and English and social in different teams), and it gives recognition to special areas like special education without isolation. We are finding that most special education students should be out in the regular programs about three-fourths of the day. This can be done with individualized instruction and team approaches.

For the 70's, we really ought to have courses that are taught almost entirely on an individualized basis and completely interrelated when it makes sense to do so. Individualizing instruction does not mean one student always operating independently, or one student and a teacher always alone. It still involves the concepts of groups when groups make sense. In learning in the "big barn" concept, the students should operate most of the time independently. They should select materials which they want to study, and there should not be the formal courses most schools now have. If the students want to study in the area of economics, for example, they can work with teachers to develop the kind of program that would include the knowledge they hoped to gain. An individual student might be the only one in the school studying a certain phase of economics because this was meaningful for him at this particular moment. Again, "at this moment in time" is a crucial consideration in curriculum prescription.

There may be a group of students who are interested in a certain concept; each student may work at his own pace and at his own speed. They are brought together in small groups and large groups when needed to discuss the program or the materials or concepts, to share ideas, or to interact, because we know that interaction is important in learning. In other words, in this big pool-barn kind of concept where the curricula is completely flexible, where there are no magic requirements of five days a week, and classes where you have to have 15 before you can justify their existence, a student could study the topics that he needed, was interested in, and had the ability to accomplish. Teachers should not teach groups day after day but should act as motivators, stimulators, and tutors. This big pool allows for completely individualized and flexible programming, with few constant demands, with continuous progress, and yet, still provides group interaction and laboratory experiences when and where needed and at the appropriate time.

In later chapters more detail will be presented as to how to individualize. There is always criticism from teachers that it is impossible to individually diagnose and prescribe. They claim that they are not trained to do this and that they will make mistakes. It is true that mistakes will be made; M.D.'s make mistakes in their diagnoses. But look at the mistakes being made now by educators. We diagnose and prescribe every day, but tragically we do it by the group method. Everyone read this chapter, do these problems, or have this assignment ready by Friday. Day after day, all over America, teachers pretend to have diagnosed and prescribed because they claim all students in the class need the same instruction. Nothing could be further from the truth.

We will continue to make mistakes as we individually diagnose and prescribe, but not as many mistakes as by the group method; we have the time and the techniques. If we will stop trying to "cover content" and take time for individual conferences, we can do it. The tools for individual diagnosis are those we already have and use. The proposed difference here is that we should use a more formalized approach and application of these techniques.

In individual diagnosis we are still going to use the subjective evaluation of each individual teacher. We are also going to combine it with the subjective evaluation made by a team of teachers attempting to understand the best program for each student. Homemade teacher pre-tests play a part. Standardized achievement tests can still be used but only to measure individual growth in the content area measured by the test, not as a group comparison. Standardized individual diagnostic tests are used, such as the Illinois Test of Psycholinguistic Abilities which is available for early childhood diagnosis. Evaluation by resource persons, such as psychologists, sociologists, and M.D.'s, provides further information. Examination of previous history and analysis of anecdotal statements will play a part. New subjective scales now underway to measure such areas as acceptance of responsibility will be used. The student contributes to the diagnosis by expression of his needs, interests, and abilities. And finally, individual parent and student conferences add valuable information. These eleven techniques, when formalized into a procedure for individual diagnosis, form the basis for developing an individual prescription.

The prescription uses the material gathered in the diagnosis. Each professional teacher determines to the best of his ability a prescription based on the analysis. The teacher meets with several other teachers to reach an agreement on general prescriptive areas. Individual performance criteria need to be spelled out and reviewed weekly, quarterly, or yearly, depending upon the individual progress. Individual student conferences are held. Teacher talk develops around the individual student and the learning experiences suited to that individual. Students are heavily involved in their own prescriptions.

Obviously, in order to do this the school's philosophy and organization must change. The six components discussed earlier in this chapter must be dramatically revised. Schools will need capsules, contracts, unipacs, multiple reference books, paperbacks, programmed materials, filmstrips, tapes, single concept loop films, recorders and projectors, phonographs, and beefed-up resource centers. Current texts may have to be torn up and subdivided; curriculum project materials must be individualized; programs must be self-paced. Students need to write their own lesson plans, develop their own quest activities, and be allowed to pick from a smorgasbord of activities.

As we are challenging change, we must look at the whole concept of learning. What is the nature of learning? How do kids learn? There is a thought that says, "Effective oral communication is when students teach and the teacher learns." When are we going to come to the realization that frame of reference has a tremendous influence on how students learn and how they communicate, what they understand, and what they learn in class? We need a tremendous attack on this whole area of learning. Do we really know all we need to know about learning? Learning about learning should be a major focus of pre-service and of in-service efforts. Why isn't there a full-speed-ahead attack on the question of how individual students learn, and why haven't we done more to implement what knowledge we do have? Why do students still get D's and F's and drop out of school? Perhaps it is because we do not understand that learning takes place when the students teach and the teachers learn.

What is the leadership role of the teacher? Have we ever analyzed classroom behavior? Do we know what is accomplished when the teacher stands up in front of the class and talks and talks? What kind of verbal communication results in good learning environments? What kind of communication is best for a teacher to use? Who is a successful teacher? What are the criteria for knowing whether the teacher has accomplished the goals that the students were to reach? What about theories and knowledge in the area of instruction? Have we applied them to teacher training? Why is it colleges still lecture three times a week from 9 a.m. to 10 a.m. to young prospective teachers in a course called Adolescent Psychology and say, "Don't lecture to adolescents"? Have we really begun to analyze teacher supervision, as an example? Does the supervisory teacher who observes the student teacher from the back of the room and watches the verbal interaction that takes place in the classroom really know what to look for in terms of successful teacher behavior? What might be the role of the teacher in the whole world of simulation, games, and other teaching techniques that are beginning to be researched in some of the innovative schools? We really have not studied very carefully this whole area of the leadership role of the teacher.

As we challenge change, what about students' rights? This is going to become one of the crucial issues in the next ten years. If some of the present change agent educators were students again in high school, knowing all the things that they know now, and if they were attending a conventional high school with bells ringing, hall passes, study halls, single textbooks, tests on Friday, final exams, and all those wonderful things that we have done to kids all these years--teaching them as if they were jailbirds--these change agents would be the leaders of student revolts. If students don't rise up and force educators to throw out many of the traditional worn out rituals, then the students are doing education and themselves a great injustice. Students should be urged to peacefully boycott; but even more, schools should eliminate the hangups that are causing student unrest. In most instances, the students are right, except in some cases spurred on by a fanatic minority.

At the present time, administrators are caught in a great dilemma. Students are beginning to exhibit dissatisfaction and are hammering at the administration. Teachers are going on strike and demanding negotiations. The adult is dissatisfied with the American society, and he sees the schools as part of the blame. Are the students right in their criticisms or are they wrong? And what about faculty grievances? As we look at the rights of students, and the things which they are complaining about, we find many of them to be legitimate grievances; there is a place for them. They are exposing fundamental flaws in society and in the academic establishment. They are exposing, for example, the fact that the war on poverty probably needs 50 billion dollars to tackle a task for which they may have only 1.7 billion dollars. It may be that 80 per cent of the population must give up more of their income in order to correct the deficiencies we now find among the 20 per cent of the population.

If students are in conventional kinds of schools, we should be among the first to urge them to begin to demand some changes. However, rather than have them be forced to demand change, those who are in command of the schools today--the parents, school boards, administrators, and teachers--should recognize that we need change and that we should offer this change before the students demand it. We should say to them, "We must change the kinds of schools we have. You are right in some of the criticisms you are making; therefore, we are going to adjust the learning situation so that you can have the kind of school you deserve for optimum learning potential."

Educators must challenge the traditional practices in the conventional schools and the newer practices that have been adopted by the innovative schools. We must challenge the flaws in the society and in the general educational systems. Rather than to constantly criticize each other and bicker and fuss and fight, educators together must take a look at the prospective changes in the society which are coming by the year 1980, 1990, and in the 21st century. We must ask questions: what are the implications for education of these prospective changes in society? What do we really believe about schools, learning, and boys and girls? We must challenge the need for further change; in so doing, hopefully we will develop schools that eventually will become significantly different and significantly better.

Chapter 3

RATIONALIZING ONGOING INNOVATION

This chapter deals with the development of a rationale for ongoing change in American schools. If we challenge present schools as we did in Chapter 2, and if we envision some possible improvements as we did in Chapter 1, and if after envisioning and challenging we agree that some revision is desirable, then it now becomes the task, as a third step in achieving change, to create an environment, a climate which can serve as a vehicle for successful renewal. It is often stated that the man who is educated is the man who has learned how to learn, who has learned how to adapt and change, and who knows that no knowledge is secure. If these thoughts are valid, then how many concepts are rejected by current educators merely because we are not familiar with the proposal and have not learned to adapt and change? How many ideas are rejected because they do not meet individual frame of reference criteria?

In the October 9, 1967, issue of U. S. News and World Report, the title of an article "Airports of the Future," was of interest to educators. Part of the sub-statements read as follows: "Revolutionary Changes Lie Ahead -- Airports Being Built or Designed Will Offer Fantastic Innovations -- Walking -- Will Be -- Almost Eliminated." The educational innovators could not help but think at that time, knowing how desperately airports need to improve, how the air industry can talk about revolutionary changes and fantastic innovations, and then proceed to accomplish these changes; in fact, air travelers actually encourage such new directions. As a deep contrast, look at education. Educators are usually afraid to openly discuss revolutions or fantastic innovations; in fact, many have a difficult time in some areas even talking about evolution. The question now, though, is before schoolmen: should educators talk about revolutionary changes and fantastic innovations in the schools?

Some people have accused the innovators of moving too fast. Review comments made by leading educators prior to 1920. "Marks in the elementary school are not to be recommended, and at the high school level they are to be patiently tolerated--only because of the requirements of the colleges which are based upon some such records--." "These concepts and these programs that we are laboring over today are by no means new--they are hardly revolutionary--we are not moving too fast--we are not changing too rapidly--we are not innovating irresponsibly." Yet, fifty years later we still have report cards in elementary schools; we are still tolerating Carnegie units because of the colleges, and we are still trying to convince people that new ideas in education are not revolutionary.

We are headed into technological, cultural, religious, and social revolutions and evolutions as we approach the twenty-first century; yet, some schools are still reading materials similar to such obsolete comic books as Buck Rogers--we already know how to go to the moon--and even worse, many schools are still tied to the single textbook--the basal reader, for example--purchased from one of the major publishing companies.

One of the reasons we are presently so concerned about change is that of the problem of the time span of adoption. We are all familiar with the early studies that generally indicated it has taken fifty years to bring about change in education, in terms of nationwide acceptance and implementation of the proposal. Some of the newer indications show that a few of the current innovations are being adopted more rapidly. However, as one looks at many of the changes suggested in the schools, one finds that the time span of adoption curve still is generally true. About 2.5 per cent of the schools in America could be classified as truly and exceptionally innovative. Another 13.5 per cent could be classified as early adopters, 34 per cent the early majority, 34 per cent the late majority, and 16 per cent the laggard schools. From the time the laggard school finally adopts something that the innovative school started, often a fifty-year time span has elapsed, even for a change that we finally all agreed was worthwhile. For those who don't believe this long span exists, just look at the early childhood problem; until the advent of Headstart, only 50 per cent of the children in the United States had an opportunity to attend a kindergarten type program; some states still do not have publicly supported kindergartens. Yet, kindergartens are over fifty years old, and a full-day, individualized, five-year-old program has shown to be of tremendous value for most.

Education today, then, evidently must embark upon a new speedway. In listening to such races as the Indianapolis 500, innovative educators cannot help but reflect on change in the racing industry. A few years ago the front engine Offenhauser ruled the race track. Their owners thought they had a very fine machine. Then along came the rear engine Ford. People laughed at it. Too small. Not durable enough. People claimed it would never replace the Offenhauser; yet, about three-fourths of the cars at a recent Indianapolis race were Fords. Only a few Offenhausers were still in existence, and then along came the turbine. It was better than the other racers; but what was the first reaction--yes, to reject it. Even the racing industry has difficulty in breaking traditions and allowing change to occur, but as witnessed by the acceptance of the Ford and now other new models, it is certainly obvious that they can do it much more rapidly than educators. Schools must join the educational speedway. We must move from the Offenhauser to the latest designs, knowing that around the corner is another new revolutionary proposal.

We have to get used to change in education. We have lived too long with people whose feet have been solidly on the ground; we must now begin to get accustomed to living with people who have their heads in the clouds.

We are seeking new goals in education. For years, we have tried to go up the same side of the mountain. It seems we keep getting hung up on the same cliff. In taking the same path, and in trying to reach the same goals, we have never been able to accomplish the task. In education today we are saying, "Let's take new paths; let's reach new goals." Certainly some of the things we have done in the past we want to retain; on the other hand, we now have additional goals and new ways of reaching all goals.

One of the newer goals that we are consciously seeking in schools is to develop self-directing, responsible, decision making individuals. In the past we have given lip service to that statement; we have never organized schools to accomplish this task. We want students to enjoy school and learning. We want them to look forward to self-education in a lifelong pursuit of meaning. We are interested in having them discuss concepts; we want them to learn about process; we want them to inquire, to discover. These things are more important than content. It is true we are still interested in content, but what content? We need to re-evaluate our traditional curriculum offerings. There is a fairly accurate cliche that says about half of what we are teaching is irrelevant, and the half we should be teaching has not been discovered.

One of the major reasons for change in schools is the terrific problem of dropouts or pushouts, both the in-school and out-of-school type. The in-school dropouts will be discussed later. Suffice it here to present a recipe for out-of-school dropouts or pushouts, by Hugh Wood, Professor at the University of Oregon. As one reads this statement, it is hard not to reflect on the kinds of programs we have for the many non-achieving students in schools today.

> "Take one poor American boy, give him as little love as possible, kick him around a bit at home, put him in an academic school room with a subject-centered curriculum and a scholarly teacher who sees no hope for him. Fail him once or twice, never give him more than a "D", be critical, never praise him, treat him as a number rather than a person, and do not let him even feel he belongs in school. Transfer him from one school to another occasionally, keep him out of school activities. Stir these difficulties well together, make him angry enough to play truant a few times, cook well in social class structure, burn to a crisp with sarcasm, and bake two or three years. This should produce something you can sweep outside or under the academic rug, but if you cannot get rid of him this way, tell him he has to take English with Miss Brown. If you want to frost this with a little juvenile delinquency, deny him a job the first 30 places he tries. If this recipe still produces a good American youth, try again."

As schools have begun to change, many individuals have tried to classify the issues and trends in instruction today. They have run the gamut from so-called "crucials," to so-called "mechanics." What are the issues which are forcing the development of a rationale for change?

In the area of diagnosis and treatment of learning disabilities, we must look at questions relating to psychological influences on learning, perceptual-motor training, self-concept and ego, psycho-motor influences on reading, and the roles of the cognitive, affective, and psycho-motor domains, to mention but a few. In the area of teacher leadership roles and interaction analysis, we have yet to determine the most effective teacher behavior. Teachers have not been given research training; we are still disputing theories of instruction; micro-teaching types of ideas are still just possibilities for real improvement.

The whole concept of living in a global village is unexplored. What is a model city; how can education contribute to solving problems of crime, minorities, poverty, and slums? Should not school districts have local planning, research, and development centers? Teachers and negotiations and their roles in a global village as professionals, as decision makers, as participants in the problem of students' rights still are under revision. And in the global village, perhaps a course called The Future, taught by a team of sociologists, psychologists, physicians, economists, scientists, anthropologists, architects, and planners, and focusing on 1980-2020, might be more relevant for current students than courses in the Ancient and Western Civilizations.

What about the scope of all of the coming changes? Are we talking about a rationale for change only in the United States, or has it become international? Germany, Sweden, and Denmark, to mention only a few, are involved in studying and implementing new directions in education, indicating that other nations are beginning to awaken to the same problems we have in the United States. The U. S. Office of Education has funded regional laboratories. Articles being written on change in education are coming from social scientists and others outside the field of education. The Designing Education for the Future Project, the National Institute for the Study of Educational Change, the Educational Facilities Laboratory, the many university centers where professors are studying the change process have been additional indications. Innovative leaders like J. Lloyd Trump, and the number of experimental schools developing throughout the world are showing that the scope is more than local; it has become national and international. There is a growing awareness of the need for change in education.

One of the reasons for this new vision has been federal funding. Title III, for example, has enabled school leaders to consider projects to advance creativity in education. Title III centers have encouraged the development and demonstration of worthwhile innovations in educational practice through exemplary programs and through supplementing existing programs and facilities. Title III has been involved in the processes of inquiry, invention, demonstration, and adoption, thus helping overcome some of the major problems we have had in the past in developing a rationale for improvement. In spite of all recent criticisms of, and flaws in, Title III programs, Title III has been a fantastic contribution to change.

To be successful, though, we certainly need further visions. For example, why don't we have electronic bluebirds? Why should students spend as much as two hours a day on a school bus looking out of the window? Couldn't those two hours sometimes be spent in individualized instruction through computers, dial access, tapes, and other media? Certainly the school bus could become an automated arrangement. We may have helicopters taking school children rather than buses; the next step then would be electronic whirly-birds. These things may be out of the question at the present time, but already students in Kentucky and Mississippi are learning through materials from automated centers in California. Perhaps electronic bluebirds and whirly-birds will never come to pass, but the ideas of students being transported in some other fashion than spending two hours in buses will eventually lead to improvements in this area. It must be remembered, though, in favor of the present system, that for some of the students, and they should be identified, perhaps the 360 hours that are spent talking with friends on the bus is the best way for them to spend their time. However, a number of those students could certainly benefit from some other use of the 360 hours.

One major problem we have always had in education is called calculated apathy. It is another word for complacency. We have been so content with the status quo in most communities that we have been unwilling to change. As we begin to develop a rationale for change, we are going to question some sacred cows. Questioning sacred cows causes emotional upheaval. Generally, change seems to occur through upsetting experiences in a supportive climate; in other words, the needler from outside upsets the status quo inside. However, on the inside is a handholder--a superintendent or other who can support the concept that change will not occur without planning. This type of approach toward eliminating calculated apathy leads to consent and consensus, and thus situations where the community is prepared to accept change.

If one looks back into some of the history books, it is easy to develop a rationale for change, especially if we believe we have better ideas now than we did 200 years ago. If we look at a picture of a classroom in 1770, we find a teacher sitting on a little platform listening to children recite while the others sit on benches; the dunce is in the corner. One hundred years later, 1870, the picture shows the teacher still seated listening to recitation; but she is down off the platform, and the students have a type of crude desk. As we approach 1970, the situation is basically the same. The teacher is still sitting listening to a group recite. The students have been jammed into probably even more uncomfortable desks than they had in 1870, and they are engaged in busy work. Little has changed in terms of classroom organization in 200 years. Hopefully, in the 70's we will find more schools with programs that eliminate thirty children sitting in desks facing the blackboard.

As we talk about a philosophy geared to change, we certainly want to discuss and plan for different teacher-pupil relationships. In most schools we still have too many teachers who say "Go to the office, John." There is a negative approach toward boys and girls. Discipline and control of the environment are seen as the most important factors. In the new kinds of schools we want teachers to say, "May I try to help, Johnny?" We want sunny bright kinds of environments where teachers are not concerned about control but are concerned about the needs and interests of each of the individual students. We are not concerned about imposing the authority of the teacher upon the student; rather we are concerned about working with the student to help him become a self-directing, decision making individual.

In this situation the organization can develop a fifty-fifty relationship with students, not a ninety-ten relationship. Most schools now find ninety to one hundred per cent of the decisions made by the principal or faculty as the voices of authority. Students do not have a part in deciding what is best for them. In the new schools, at least fifty to eighty per cent of the decisions are made by the students. This means that teachers are going to have to study new methods of learning and instruction. They must review, in light of the learning and instructional concepts now available, the kind of curriculum that is relevant to students.

Teachers must decide whether their emphasis is going to be on content, or whether it is going to be on the development of logical thinking, discovery, and inquiry techniques. Are they going to permit and encourage the students to question the authority of the content, of the textbook, and of the decisions made by the adults?

A rationale for change certainly includes revision in the university and teacher education programs; the Old Ivy Tower must change. This business of the college professor being an expert with prestige but confused as to whether his role is to teach, research, or write must be reviewed; the traditional academic senate and the publish or perish routine must be eliminated. Can we put up with fifty more years of segmented departments in colleges and Ph.D.'s who know all the answers? Can we continue to put up with colleges which insist upon grade-point averages and Carnegie units, Monday-Wednesday-Friday lectures, final exams, rigid schedules, required attendance, egg crate rooms, and ringing bells? It is amazing to realize the number of colleges in the United States still ringing bells and relying on the course textbook. There are very few innovative colleges in the United States. Teachers are not being trained to teach in innovative schools. Administrators are not being trained to plan for change; and yet most Americans are quite sure that the society of 1980 and the society of 2000 will be entirely different than the present. When are the Ivy Towers going to change?

Considering that right now teachers really are trained in the general culture and not in colleges, it causes wonder as to why we even have colleges of education. For example, watch six-year-old children play doctor; they give a shot, use a stethoscope, and give the patient a pill, but that is it. They cannot perform the other functions of the doctor because they must go to school to learn these. However, watch children play school at age 6; little Mary can do everything the teacher can. She can scold, put students in a corner, assign them workbooks, have them sing a little song, sit in a small group and read a book, and have them go out for recess. There is little need for the present colleges of education. If teacher education is to become meaningful, we must take a look at what the schools of the 90's probably are going to be like. What will the general functions of these schools be? What will the social functions of the school be? What skills, concepts, and knowledges will be needed by individuals living in the society as the year 2000 approaches?

Fortunately we are beginning to see a few new programs in teacher education. Some schools are saying goodbye to student teaching, methods courses, college supervisors, 20-30 hours of mickey mouse education courses, development of multi-purpose teachers, the socialization and intellectualization of teachers as goals, college professors' stuffy lectures, traditional final exams, the single textbook, and rigidity and sameness. The colleges of education must teach the way they expect teachers to teach; they do not expect teachers to lecture three days a week.

We have evaluated the present teacher education programs to some extent and found them inadequate; thus, hello innovators. Fortunately, around the country there are about fifteen colleges and universities that are trying different ways of educating teachers. They are looking for better solutions. Part of the problem is to evaluate these new efforts, to measure their effectiveness, and if seemingly effective, to encourage the universities to go even further.

We are getting to the day when we will have differentiated teaching staffs, and colleges must train people for these positions. More and more master teachers will be hired to work on a twelve-month contract; some teachers will diagnose and prescribe, while others will carry out part of the prescription. Some of the experimental college programs say that behavioral changes of teachers occur in a clinical approach. Are micro-teaching, individualized projects, simulation, T-grouping, and sensitivity training the ideas which are going to help in teacher education programs? Should we start freshmen in college into the teacher education program via work in the schools, or should we wait until the master's program as some colleges propose? Certainly these questions, in terms of new directions of teacher education, are illustrative of the kinds of programs we must consider if change is going to occur, not only in teacher education programs but in all schools, pre-K through graduate degrees. Further, consideration must be given to the problem of teacher certification. We are so stagnated in the belief that 18, 22, or 32 hours of education courses make a person certified; and we are so certain that we can separate an elementary teacher or child from a secondary teacher or child merely by deciding upon labels called "6th grade" and "7th grade," that we seem to have lost all hope at present of ever improving teacher preparation. Fortunately, a few are grumbling at the absurd way we certify teachers. One of these days the revolutionaries are going to have their day in court and out will go the present inflexible magic requirements.

Even more, besides the revision of the present state department rituals regarding certification of teachers, out will go the horrible regulations now in force regarding high school graduation. In Minnesota, for example, all high school students must take four years of English, three years of social studies including one in the senior year, two years of physical education, one year of math and science. No art, music, industrial arts, home economics, foreign languages, or business education is required. Just what research is there to indicate that three years of social studies is more important than art for all students or for that individual student? What does social studies in the senior year do for an individual? Does he enlist in the Army, wear his hair shorter, or what?

Regulations regarding high school graduation and teacher education are obsolete and ridiculous. Even if most educators could agree on some of them, there is no research to support their claims. The idea of high school programs based upon the demands of college entrance is equally insane. High school people know more about student needs at this level than do the colleges. There will come a day when there will be a mass overhaul of high school and college graduation requirements and teacher certification. In the meantime, innovative educators should do everything possible to circumvent regulations which work against the needs of the individual. One day, for example, secondary principals of a given state will just refuse, as an association, to honor state department and college rituals. That day will be the dawn of a new era for the students of America.

Until recently very little was known about successful teacher behavior. After all these years of teaching, we still really know very little about what methods and what personalities are best for a teacher; subjective ratings have usually been as good as objective ratings. We are beginning to reach conclusions, some of which have even seemed to indicate that organization makes very little difference. Of course, the effect of the differences which have been studied have been measurements of traditional academic achievement in the cognitive areas, such as the Iowa Test of Basic Skills. They are not evaluations of environment as related to new concepts, such as responsibility and decision making. The whole area of teacher methodology needs a great deal of research.

As we approach the 70's and look at individuals in teaching, we find that some teacher characteristics do make a difference. We are beginning to find some evidence, for example, that teacher warmth seems highly defensible; that indirect approaches are more effective than direct; and that teachers who exhibit valid cognitive structures in their subject fields seem to have more success. The further question is, can science contribute more to the prediction and evaluation of successful teaching? Can new technological advances give some answers as to successful teacher behavior? Certainly this whole area of not knowing what makes a successful teacher points out vividly the need for evaluation of the total education systems, not only the traditional but innovative proposals as well.

One approach to summarizing the questions and suggestions made in this chapter, as related to the development of a rationale for change, is to suggest that as a way of starting on a broader scale than just the local school level, the districts and regions might hold dreamers' conferences. Invited to these sessions should be sociologists, philosophers, psychologists, industrialists, scientists, physicians and educators. These groups should discuss as well as they possibly can where education is now, and then contrast that picture with visions of where it ought to be now. Out of these conferences should grow a commitment and plans for change and how to change if they are to catch up and keep abreast of the coming world. Besides the here and now and the very near future, the dreamers' conferences should focus on the question of what will education be like in the year 2000? Speeding up and retooling right now is needed and will help. Future evaluation and reflection must be built into the change program, but communities should have as their long-range goal a different kind of education for 1980, 1990, and the year 2000; schools must commit themselves to on-going innovation. If ever there was a time to develop a rationale for change in the schools of America, that time is now.

Chapter 4

PLANNING FOR IMPROVEMENT

Once a school faculty has envisioned change to the point that the group has decided that some improvements could be made (Chapter 1), once the staff has challenged change enough to realize that improvements should occur (Chapter 2), and once the faculty has developed a rationale for ongoing change in their school (Chapter 3), that faculty is now ready to draw some blueprints--to plan for change and improvement--which is the topic of this chapter.

We have been discussing change in the first three chapters as related to a total school district or to an individual school, but still in general terms. As we look now at planning, it is time to be more specific. Whether the school wants to make 5 changes or 50 changes, each one, or each related series, should be planned; the degree of planning is dependent upon the goals and the total situation which is being retooled. There is no "one way" to change or any "exact" degree of planning; some changes can be very effectively and successfully made on the "spur of the moment"; others need long, painstaking consideration. Ironically some of the "big" changes can occur faster and easier than some of those thought of as "little" changes.

The past three years several educators have used ten suggestions or criteria or guidelines for the planning phase of change. These ten suggestions regarding planning were suggested in Volume No. 3 of the Designing Education for the Future publication, Planning and Effecting Needed Changes in Education, now printed by Citation Press. They have been modified and revised some since then, but the basic concepts are still applicable.

If a staff will carefully follow the ten suggestions, usually in the order listed, and plan each step well, then in most cases, if the original idea is sound, the implementation which follows will be successful. Schools may want to develop their own list of guidelines; they may differ from those presented here. Schools can use those presented or create specific ones for their particular school or district. Educational institutions need some type of general blueprint which will provide for great flexibility as the ongoing, changing, evolving efforts of the school staff take form.

Before listing and discussing the ten suggestions, several additional concepts related to the necessity for change need to be presented. Without such constant reminders about purpose, many projects fail; educators attempt bandwagon changes without a clear understanding of need.

Many school personnel have been saying for a number of years that most of our schools are obsolete; across the nation, the present school which exists in most communities must go the way of the dinosaur. Almost every day we can look at newspapers, magazines, or book lists and find articles or publications on the need for revision of the schools.

Fortunately, many inventive educators have been joined by visionary social and behavioral scientists; within the past ten years, an increasing cadre of "change agents" has been saying pretty much the same thing--schools must change. The seeds of dissatisfaction with present efforts are being well sown; the great problem is to replace the obsolete programs, procedures, and buildings with concepts which are dramatically new in education. The only real quarrels now revolve around the questions of what is better and how can any agreed upon recommendations be implemented.

One of the most important of these new concepts says that "if schools are to be significantly better, they must be significantly different." If we adopt this conviction, the question then becomes, "How can we do it?" What are the mechanisms for achieving change? Unfortunately, presently we have no real mechanism for planning change in education. Successful educators are often not able to tell others how they were able to bring about a particular change. However, we do now know a few things and are learning others; we know that once we start we must involve the staff, we must evaluate, and we must build provisions for on-going or continuous innovation.

In order to discover additional information about how to change and what is better, more and more schools are needed as beacons for innovation and improvement. We must have exemplary programs. Some schools must lead the way. Most of the change that has taken place thus far has been in the suburban schools. Very little has happened in the rural and urban areas. However, now the social pressures and the possibilities of civil strife are forcing renewal in urban situations. But as of yet very little of immediate consequence has occurred in the rural areas or in the overwhelming majority of all the schools throughout America. A few projects have been attempted and fortunately some cities and some states are now getting involved in long range planning, seeking solutions to suburban, urban, and rural dilemmas.

As this new effort to plan for change gets underway, we need to understand the role of the local leadership. We must realize that some of the local leaders must become R and D men--they must involve themselves in research and development. Others need to be inventors in education; many need to be adopters. Title III and other foundation funds have presented some opportunities for dreamers to invent new situations and for research and development to occur. Once these solutions are presented, the ideas must be diffused with zeal by their advocates.

These missionary type leaders are still seeking to understand the mechanics for spreading new ideas. In the past educators have only been involved in dissemination. We have told people about a new idea, but very few listened and thus little occurred in the school. We need a commitment from some schools to demonstrate--to actually try the idea rather than just talk about it. At the end of this diffusion process, other school leaders must say, "I'd like to try that." Then we get to the third role of part of the local leadership, that of adoption. Once the decision is made to adopt a new idea the local leadership must see that the materials are analyzed and evaluated and some determination made as to whether or not the program is successful enough to pursue further, either in its present or in a modified form.

During the following discussion of planning for change, many of the mechanical facets will be considered. But change agents should remember that the focus of change--the real reasons for planning for change--revolve around the individual student and individualized learning. We are interested in the universality of education, where all boys and girls receive a better program, regardless of ability, interests, needs, religion, color, geographical location, or any other factor. American education must begin to focus on the individual, not the group.

In planning for change, we must realize that if we attack people, generally we will not be particularly successful. People become rather defensive when they are told they are doing a terrible job or they need to improve, but we can bring about the same change by attacking the components of the educational system rather than the people involved. In other words, if we can say to the person, "If we could only develop a way of doing this differently, just think how much more we might be able to help these students." People will usually listen to attacks on the components and sometimes accept the notion that maybe they should consider changing some educational practices, but they generally reject personal attacks.

In planning for change in a school, consideration must be given to revision of each of the six components discussed in Chapter 2. For example, we certainly must change the learning environment. Unfortunately in most schools we still place students in a room with 30 desks facing a blackboard. If we are to make significant alterations, such as the abandonment of the single textbook, the adoption of multi-media resources, the elimination of the old 55 minute bus schedule, the replacement of the self-contained classroom with team teaching centers, and the use of technological systems, we must develop a mechanism which will offer some hope of rapid and successful revision.

There is presently no magic way to do this. The ten guidelines suggested below for planning and effecting improvements in individual schools are not exhaustive, nor necessarily original, nor do they ensure success. However, they have proven to be of great value in a number of practical school situations. If we are going to change attitudes and directions and components of the present schools, perhaps these ten steps might be considered in the following order.

The FIRST and most important step or guideline is that of developing committed leadership. Unfortunately most schools generally reflect the principal. The result is that many schools are rather dull and unimaginative, because their administrators fit that description. The training of administrators through the university and/or district in-service programs is obsolete. The methods usually develop leaders who are basically afraid to venture from the time worn path. The intern program of the National Association of Secondary School Administrators was an attempt to change this process. The principal of a school must accept that his primary responsibility is that of achieving change, when change is synonomous with improvement. The great educational leaders are like the orchestra leader; they turn their backs to the present crowd of status quoers.

Some principals are actually still against change. Some are still wondering whether they should even try to get ready for change; presently they are still sitting on the fence. Other administrators are actually deeply involved. Perhaps the description of innovators as stated by Everett Rodgers of Michigan State is rather appropriate here. "Innovators are venturesome individuals . . . they are generally young . . . they are cosmopolite . . . they spread new ideas as their gospel . . . they are likely to be viewed as deviants by their peers . . . they are in step with a different drummer . . . they march to different music." No school has a chance to make the contemplated change successful if it does not have committed leadership; it goes beyond the principal too; there must be a core of excited innovative teachers who want the program to succeed; they must be just as much or even more committed than the principal; the administrator cannot achieve successful change without this committed leadership at the teacher level too.

The SECOND suggestion or step in the planning process is to review the literature. This is not just another academic college exercise, but has become quite essential. At the end of this book is a bibliography which merely gets at some of the writing on change; it in no way attempts to cover the growing amount of material available on the change process. Much of the best material now available is still in the form of speeches, mimeographed statements, dittoed copies of someone's ideas, experimental project reports, or magazine articles. None of these types have been listed, but instead merely a few of the books discussing the need for change, the change process itself, and ways of successfully implementing specific programs. In order to achieve planned change in a school, the committed leaders must read the literature. Part of this reading relates to the inventing literature--how to implement the change--how to get acceptance of the idea of flexible scheduling for example--the real change process in action.

If more administrators would read the literature they could avoid many pitfalls. Reports of value have come from the Cooperative Projects of Educational Development, from the Ohio State Theory into Practice Newsletters, from the attempted National Institute for the Study of Educational Change, from the Institute for the Development of Educational Activities, and from the Designing Education For The Future Projects. Although none are going strong now, the material produced by their organizations are among the significant reports regarding planning for successful change. Even now, though, these efforts are becoming obsolete as many writers and groups have undertaken the task of seeking answers to the problem of retooling. But part of the solution still seems to indicate that schools need to identify a committed leader at the administrator, teacher, and student levels; these leaders must read the literature. After accomplishing these two tasks, schools then appear to be ready for the next step in implementing a specific change.

That THIRD suggestion is for the school to evolve a philosophy. What is going to be important for boys and girls in the year 2000? Will this change or these changes be defensible in terms of basic beliefs? These questions are not an academic exercise, but are crucial to the successful planning for change. The school needs a working paper in a constant stage of revision, but one which at a given moment in time can be referred to by a staff when trying to reach a decision about adopting a change in the school.

This philosophy ought to be rather specific--no more than two or three pages. It should relate what the teachers really believe about students, about learning, and about education in a rapidly changing society. . Comments on self-direction, self-education, multiple personalities, goals of the learner, motivation, appropriate tasks, open-endedness, creativity, positive self-image, success each day, diagnosis/prescription/alternatives, individualized instruction, continuous progress, and responsibility must be fairly well spelled out and agreed to by the staff. A rough working copy of one such effort by a staff is presented here. It still needs revision and much of it should be stated behaviorally, but it may serve as a rough sample and thus help schools make a practical start.

Tentative Working
STATEMENT OF SCHOOL PHILOSOPHY
Developed by the Staff of Wilson School,
Mankato State College, Minnesota
Mrs. JoAnn Lawson, Chairman,
May, 1969

I. Purpose:

A. The primary purpose of Wilson Campus School, as a laboratory school, is to benefit education as a whole through innovation, experimentation, research, and evaluation of many new programs. To this end Wilson should continue conventional methods only where they really appear to be best for certain individual students; Wilson should be one of the schools probing the future.

B. As a part of the experimental nature of the program, the school provides a laboratory setting for pre-service and in-service training of teachers and administrators in cooperation with the Mankato State College School of Education, especially aiding new designs in teacher education.

C. At the same time, Wilson Campus School serves the students by helping each one to understand and to respect themselves, other people, and their world, by becoming responsible, decision making, self-directing, value judging, self-educating individuals.

II. Beliefs: Wilson beliefs are based upon present knowledge and understanding of growth and learning; they may change as future research changes that knowledge.

A. The Student:

1. All students are different and have different capabilities, needs, and interests, which change from day to day even within the same student.
2. Anything taught and any method used to teach it should be appropriate to the student's capabilities and relevant to his needs and interests at the particular time, rather than be only continual preparation for the next step in his education.
3. Every student should find some success every day; the school must utilize every person, method, and material possible to give him a greater chance for success.

4. Because factual knowledge changes and multiplies so rapidly, emphasis should be placed on process and inquiry rather than on product and content. The student should be encouraged to enjoy learning, to be receptive to change, and to educate himself.
5. The student should be encouraged to learn how to ask questions, find answers, organize his information, and draw generalizations from his information.
6. Each student should have the necessary freedom in which to direct his own behavior, make his own decisions, and form his own values. Through this freedom he can develop respect both for his own worth and unique qualities and the rights of others.
7. With this freedom, the student must be taught to accept responsibility for the results of his behavior and decisions. A situation in which the student disciplines himself is most conducive to learning.
8. The emphasis in both teaching and learning should be on human relations, tolerance, and understanding rather than on content and skills, though these are also necessary. "The goal of the school program is to help him develop an inner self capable of finding solutions."

B. Learning

1. In order to learn, each student must consider himself capable of learning and worthy of being taught.
2. The student must be interested in what he is studying and motivated to learn; the most effective motivation comes from within the student and occurs when he sees the relevance of what he is learning to his own goals.
3. The student learns best when he is trusted, when his ideas are respected, and when his learning behavior is reinforced. Negative criticism and failure lead to discouragement and further failure.
4. Creativity is encouraged when the student feels free to question everything, when divergent thinking is rewarded, and when thought and imagination are the goals of factual information and memory.

C. The School:

1. Persons affected by a decision (students, parents, teachers, and administrators) should have a part in making that decision.
2. Curriculum should not be rigid, either for all students or for all time. Continuous evaluation of the curriculum should provide for continual change as the individual student and situation change.
3. Teachers must work and plan together in order to personalize each student's program, unify the curriculum, and give the student the benefit of multiple personalities. Time must be made available for this cooperative planning.
4. The schedule must be sufficiently flexible to allow a variety of groupings, time patterns, and uses of resources.
5. The school should, whenever possible, respond to and encourage students and teachers rather than restrict them.

D. Resources:

1. The future education requires a wise, knowledgeable, empathetic teacher.
2. All available human resources should be utilized in the most effective way possible to expand and enrich the students' education. To this end, specialists should delegate their non-specialized functions to others; teachers and counselors should not be wasted in clerical duties.
3. Materials of all kinds must be provided, or developed if they are not otherwise available, for students of all abilities and at all levels.
4. Multi-sensory materials should be used to reinforce learning and to provide every possible chance to reach each individual student.
5. Teachers must be aware of all new technological and psychological developments which could be utilized in education and must evaluate the results of their use.

The FOURTH step or suggestion in changing a school is to create a dissatisfaction. Assuming that the philosophy that has been written indicates other than those now being reached are part of the goals of the school, the school faculty must begin to challenge itself: "If we are not meeting our goals and objectives, why aren't we? Could we find a better way to do it?" This questioning begins to develop a dissatisfaction with the inappropriate programs currently in operation in the school. When we look at the fact that almost one-third drop out of school on their first attempt at a high school diploma, that another one-third can be classified as in-school dropouts, and that only one-third go to college, it becomes rather obvious that if the philosophy reflects the type of thinking presented in this book, then certainly the present schools are not satisfactory, and ought to undergo rapid change.

The FIFTH suggestion or step is to overcome the barriers. If there are problems preventing the implementation of successful programs which would enable the school to reach its objectives, then those barriers must be identified and removed. Some of the barriers can be attributed to school superintendents, some to college professors, to state departments, to boards to education, to parents, to teachers, and to students. In other words, there are many reasons why schools have had and do have barriers to improvement.

In identifying these impediments to progress, it becomes obvious that many are caused by educators. For example, we as a profession have believed that if we could have 25 students in a class, that would be the optimum size, and that with this enrollment students could learn better, in spite of the fact that there is no research to validate this notion; we have said that if we could have one teacher with this class, and that if this class and this one teacher could meet daily, for the equivalent of 275 minutes a week at the high school level, or for the equivalent of 25 hours on the elementary level, then we would have successful schools, and boys and girls would get a good education.

In high school we spend time arguing whether seven periods or six periods is better for the learning process, when the truth of the matter is that neither one of them has any reason for existence. We have said if a teacher has a free period, she is a better teacher. We have said that if a teacher has 18 semester hours of those wonderful education courses, and then 18 more semester hours in subject areas, these 36 hours would make her qualified to teach. We do not certify someone who has only 17 and 3/4 hours in education. We have counted the number of books in the library, and in spite of the fact that very few of the schools have met the standards as set by the American Library Association, we still try to say that books in the library indicate quality. These are examples of barriers that we have to overcome.

Guideline SIX indicates that after identifying the barriers to change, one way of overcoming these impediments is to arrange for models. In other words, the teachers must sometimes see a model, or hear about an idea in order to recognize the manner in which the notion might be accomplished in their school before they are ready to try something new.

One model to set up in a school could be called the rational model. Some teachers are willing to change by reading about it. In other words, a teacher picks up a book on non-grading and while reading it says, "This makes sense to me; I'd like to try it." Some are sold by this kind of model. A second type of teacher is sometimes sold by what could be called the sales model. The outside consultant comes in, gives a large group presentation, meets with teachers in small groups, has a dynamic sales personality, and convinces a teacher to go ahead and get started on a new idea. A third type is the demonstration model. Some teachers just will not change without actually seeing it in operation. Therefore, for these teachers, trips need to be arranged for them to see the program in operation. A fourth type of model that can be established is what is called the money model. Not being sure the proposal will actually work, but having money available to make the attempt is one way of getting some involved in innovation who might not otherwise try. This is risk money; the teachers feel they have nothing to lose and much to gain. In changing a school all of these models and more need to be used.

For example, in trying to change schools in the Lake Region of South Dakota, the Title III Regional Center set up the Innovative Schools Project, where teachers attempted various new innovations; then they visited each other to discuss the changes, and decide whether or not they wanted them in their particular school. The districts in the project were classified as operational, advanced planning, planning, and pre-planning, depending upon the stage of development they had reached in terms of successful implementation of the innovation. This regional concept to change provided immediate models for many teachers to see and discuss.

Other regions are taking a page from the county extension agent; universities and colleges and public schools are joining together in a cooperative effort; sometimes five districts combine efforts in innovation by a pooling of part of their financial and personnel resources. Much more can often be accomplished by cooperative efforts than if each of the five districts tries to go it alone. There is no need, for example, in many areas, for all five districts to try to buy a computer; they might lease one cooperatively and all five share in its services and potential.

Suggestion SEVEN is to consider the budget. After a staff has determined it has the committed leadership for the proposed change (1), after the staff has read the literature about the change and how to implement it (2), after determining that the change fits the stated philosophy of the school (3), after becoming dissatisfied enough with the present program to desire a revision (4), after identifying the barriers previously preventing a different program (5), and finally, after considering various models as to how the proposed change might be developed (6), the staff is now ready to carefully review the budget (7), and look at the cost of the proposed change, to see whether the time and financing seem worth the potential improvement.

Some of the changes are going to cost more money. In-service workshops, new resource centers, technological developments, new facilities, and acoustical flooring all cost money. In most of the early innovation projects around the nation, Ford, Kettering, Carnegie, Rockefeller, Danforth, or federal funds from ESEA have provided the impetus to change. But regardless of how much money is available, Plan A eventually has to equal Plan B, because there is only a certain sum, no matter whether a traditional or innovative program is attempted. Further, much of the money being spent now under the guise of change should be spent in the traditional program. A library is not new, yet few schools have an adequate one; thus in many instances we are merely "catching up" to where we should have been long ago.

Actually, the key thing in considering the budget is to realize that with a little imagination a great deal can be done on exactly the same budget most school districts now have. For example, rather than hire two first grade and two second grade teachers and give them four self-contained rooms, for the same amount of money and in the same space, three teachers can be hired along with three teacher aides. A wall can be removed rather inexpensively, and these teachers and their aides can team teach, team plan, build daily variable flexible schedules or daily smorgasbord schedules, can utilize large and small group instruction, independent study, continuous progress, self-pacing, responsibility, self-direction, and techniques of inquiry and discovery; they can become involved in new curriculum materials, and completely individualized instruction; all of these can be achieved for the same expense it would cost to run four traditional classrooms. One of the methods of change then involves a reallocation of the budget and a little imagination. Many schools make the mistake of waiting until more money is available; much can be done with what we have.

Suggestion EIGHT is to select an alternative. Once the budget has been considered, there has to be a decision as to whether the entire school will become involved. In other words, will all the teachers and all the students be placed in the new program or would it be better to start with a third of the students and staff. Generally, in most schools about 30 per cent of the teachers are ready to go right now. About 40 per cent want to sit on the fence for a year or two, and about 30 per cent are against any change.

If the school is a new one built for improved education, and especially if a new staff is to be hired, the school should follow the 100 per cent approach and move immediately toward new directions in education.

Even in older schools, if the principal has good staff support, generally the 100 per cent method can be used.

However, if only 30 per cent seem ready, then the school should start with that group of parents, teachers, and students who are ready for change. We usually make the mistake of waiting until we have a majority, and that is the wrong thing to do. Start with those who believe in change; it is not fair that they should be forced to teach or learn in a rigid school just because some want to and others are not sure. Let some stay rigid for awhile, but let the innovators innovate.

Tougher schools to change can be started by the so-called pilot project or one project method where perhaps two teachers in sophomore English work together in a small teaming project. This is much too slow and not recommended unless there is no better opportunity. In a few schools, it may be necessary to use the "no project" method. In this situation, a few "busy bees," so to speak, begin discussing new ideas among the faculty over a cup of coffee. If it is necessary to start at that point, then start there; but do that rather than wait. Get them involved in discussing possible changes and develop their readiness to accept some of the concepts. Many of the basic ideas have already been tried often nationally, so now we know that they will work if implemented properly. We can speed up the process of change by selecting an alternative that will lead where we are going faster and more effectively than if no course of action were planned at all.

Suggestion NINE is to provide for ongoing evaluation. Innovators are generally not evaluators and probably should not be, but somebody must evaluate. As change occurs, methods of evaluating the program must be built into the system. There needs to be continuous short term (daily, weekly, monthly) evaluation as to present success and direction. There has to be evaluation at the end of a larger period of time, such as after a year or several years. We must plan some type of determination as to whether or not the final product is indeed any better than what was being developed before. Many objective and subjective evaluation methods are now available to measure a number of the innovations, and the findings of many of the studies are beginning to show that most of the new concepts in education, when properly developed, do help provide a better program for the students.

Suggestion TEN is titled Sell-Implement-Sell. After proceeding through the first nine guidelines, the proposed change should now be ready to create and implement. Before implementation, though, there is the necessary job of making sure that through the process of decision making, the idea to be tried has been sold well enough to launch the project. For example, if the staff wants to begin flexible scheduling, they must be sure that enough of the school board and central office and parents and students are convinced that this would be a worthy endeavor if the project is to be a success. This is why having optional choices for parents and teachers and students is best--go there if you want a traditional program, or here if you prefer the new type.

Once the final decision is made, the staff must begin to implement the practice or practices created in a more or less step-by-step process by observing the ten suggestions just described.

The second sell in the title refers to the fact that even after implementation is under way, there must be a continuous effort to sell the idea that the experiment is successful and certainly worth continuing and that there should not be too much concern over some of the problems that possibly have developed. These problems are to be expected. Of course, if the experiment does not seem to be a better approach, the school may want to drop it. However, generally, if the idea is sound in the first place and has been well planned, then if the experiment does not succeed, it is usually not because the experiment itself is not worthwhile, but most often because of bugs in the creation or faulty implementation. Perhaps at that stage the staff will want to revise their creation and their methods of implementation and re-evaluate what they have done thus far. It may be most appropriate to try again in a more polished manner. It takes two to three years to successfully implement massive change.

One of the most important factors in selling the idea of innovation to the community is to "brainwash" students into sales ambassadors. The best salesmen for a new program are the students. If they like the program, are excited about it, and it makes sense to them, generally the program will be successful. The parents will buy almost anything if the students like it. However, if the students aren't happy and are dissatisfied with the program, the school is in trouble immediately. Many schools make the mistake of trying to implement by just announcing to the students that this is going to be the new program. The students must be an integral part of the planning, they must understand why; there must be a great deal of discussion and understanding; the students must become firm believers themselves and carry the message. They more than the teachers, in the initial stages, will determine the success of the program.

Specific steps that might be taken during the sell-implement-sell stage are suggested: (1) an explanation to the staff of what the total program is going to be; this can be accomplished through a series of large group, small group, independent study, and individual conference techniques; (2) it can be explained to larger groups of parents and students, assuming that small groups of parents and students have been involved in the initial planning and explanations to the staff; (3) then start the program; (4) continue to sell the general student body and staff and reinforce the idea that what is going on is all right; (5) explain the program again to all the involved groups in various types of large, small, and individual presentations; (6) lock the door and remove the phone. No matter how careful the effort has been to involve the staff, parents, and students, and to explain and let them ask questions and become committed, it can be expected that there will be a group that will be anti the attempt or frustrated at certain stages of the innovation effort. If the phone is on the hook so that it can ring, the school will be constantly bombarded; here is another reason not to sit in the typical administrator's office. Those responsible for the change will hear, "We do not like the program, we do not understand it, we want you to stop." However, the real test of the program and when the school can tell it probably will be successful is when phone calls begin where the parents say, "I still do not understand it, do not like it, and do not want you to sell doughnuts; but go ahead and do it. The kids love school, and how can I argue with success."

The key to student support is STUDENT INVOLVEMENT; they must understand why these changes; they must also comprehend the concept that WITH FREEDOM GOES RESPONSIBILITY. The students must understand, for example, why they are being given a schedule that varies from day to day and why this schedule is going to leave them large blocks of open time where they are going to schedule themselves. During this unscheduled time, they must understand their opportunities. They should realize that they can choose a hot dog, the library-resource center, or a classroom, or about 20 other places around the school. They must understand, when they choose to go to a spot, what their possibilities are there. They must agree not to eat doughnuts in the library but instead in the snack bar. These are the kinds of understandings the students must have clearly in mind to make daily scheduling, for example, a success. If they can see that their present schedule does not provide these opportunities, they will quickly become dissatisfied and ready to consider the new program.

In further preparing them for the new program and as part of an ongoing process, there should be several student-faculty teams. There can be a student-faculty team for curriculum, another for ideas, another for communication, and another for evaluation. In other words, there may be ten students, four faculty members and one administrator on a team for curriculum. These students leave school from time to time with several teachers and an administrator; the fifteen of them can sit down in a conference room at a restaurant spending from 9 until 12 discussing the various curricula, problems, need for revisions, and the type of program the school ought to have. From 12 to 1 they have lunch in the restaurant; from 1 to 4 they continue their discussion. It is a most exciting process to see students and faculty operating on a one-to-one basis in this kind of interaction. Each member of the committee, students and faculty alike, have one vote. When suggestions are finally made and brought to a vote, this vote is recorded and submitted to the administration as a recommendation.

Another team considers new ideas in general. There should be a group of students and faculty who spend time thinking--just brain storming for ways that the present school can be made a better school. There ought to be a team for communication so that student problems can be brought to the faculty and administration, and conversely faculty and administration problems brought to the students. Finally, there ought to be a team for evaluation. The students and faculty involved should draw up surveys and questionnaires of various kinds and submit them to parents, fellow students, and faculty members to determine how the program is regarded and what might be improved. This whole philosophy, this whole concept, is built around the notion that with freedom goes responsibility. Students must be heavily involved with the faculty in the decision making process of the school.

To follow these ten planning suggestions with any degree of success, there must be supportive efforts. For example, the parents in both small and large groups must work with the teachers and administrators to communicate the ideas that are being planned or developed. Consultant service must be provided. In-service training for teachers is not a luxury, but a necessity. The teachers must have planning time, and the planning time must come during the school day; it cannot be done at 5 o'clock at night or on Sunday afternoon.

Another type of supportive effort that must be provided by the administration is travel. Teachers should be allowed to visit programs in operation. The state department must become involved. For example, suppose a school wanted to try optional attendance. Most state departments would say, "Oh no, you cannot do that." We need state departments that will say, "Sure, that sounds like a good idea to us, go ahead and try it. We will help you evaluate." Teachers must have an attitude of saying, "Hurray, today is Thursday, it is my turn to dream." Teachers should have days off from school where they are paid to do nothing but think. This is not heresy, is not impossible, and does not require extra budget; this is feasible. We have done it in a number of schools. Educators need to be paid to spend some time thinking.

The board, superintendent, school leadership, staff must be supportive of the philosophy. For example, right now in most of the elementary school districts, attendance is determined by chance of address. Little Mary lives on the north side of Fifth Avenue. She must go to the Red School; but if little Sally lives on the south side of Fifth Avenue, she must go to the Blue School. We let a few feet of real estate decide a child's education. This is absolutely ridiculous; it is contrary to all philosophical statements regarding individual differences of students and for developing a program based on the needs of individuals. It is quite possible that Mary, who must go to the Red School, would be better off in the Blue School; and it is quite possible that Sally, who must go to the Blue School, would be better in the Red School. There must be other methods devised to allow students to be more selective of the kind of school that is the most appropriate for their needs. Schools should be established with a very specific philosophy, and then parents and students should be invited to become involved in this school as one of a volunteer enrollment on the basis of a commitment to the philosophy of the school.

Part of this supportive effort involves admitting failure. If the attempt to change was a sincere effort to improve and if the attempt by chance does fail, then there is nothing wrong with saying, "We tried it and were sincere; we thought it would be better, but it was not. Therefore, we are going to drop it and either go back to what we were doing before or try a different plan that hopefully might be better."

If a staff is sincere about its attempt to change in terms of improving what might happen to boys and girls, then change must be implemented rapidly. The staff cannot take three years to accomplish something that might be done in three months. In doing it in three months, problems develop that often do not appear if created over a three-year period. On the other hand, if the staff has a philosophy that the program needs improving and needs it now, and they cannot wait three years, then they must move rapidly. They may make mistakes during this time, but these must be expected, accepted, and dealt with as they occur.

What are the implications for the future? Why must we plan for change? We have said there are at least 63 or more revisions occurring in schools today. These revisions demand new philosophies; they demand a courage not usually found in most American educators.

It has been suggested that in order to achieve the school being advocated in this book, the ten steps outlined in this chapter related to planning for all the changes can be of value to the educator trying to develop a new kind of school. No school has reached the goal yet. No school in America is the kind envisioned in this chapter or in this book.

What we are looking for then are innovative educators committed to a vision of and a search for significantly different and better kinds of schools. The timid at this point will shy away. Those with courage will continue to search, committed to a philosophy that "maybe tomorrow education will be better."

Chapter 5

ORGANIZING NEW STRUCTURES

For years in education, particularly in the way we have organized schools, we have been going down the up elevator, or as the book and movie called it, Up the Down Staircase. Most of the criticism contained therein was justified; in fact, the author was even kind. We have continued to consider organization from the least important to the most important; the nuts and bolts have had priority.

For example, as we have stated throughout the first four chapters, schools in any educational organization should consider the individual first. The concept of individualism still provides validity for the development of various types of groups; once we look at individuals, and see how those individuals might benefit from group experiences, we can then develop an organization to provide for individual needs in group situations. Again, we should look at each individual child as a physician would a patient. What does this child need, what are his abilities, and what are his interests? On that basis, then every individual student would have his or her own personalized program. From a practical point, and from a desirable point of view, at various times the student would be placed in groups for interaction with other students or to work with those who happened to have a similar common need at the same time. Out of the arrangement of individual and small group programs should grow an organization which would allow such a philosophy to function. The organization should be the last thing to be considered.

Until now, what have we done in most conventional schools? We have organized first; we have hired administrators, set up rigid schedules, announced dress and discipline policies, and determined group requirements. Prescription on a group basis has never been appropriate for every child entering that particular school. Even before we meet the individuals, because this organization calls for groups, we hire teachers; then we argue whether to group students homogeneously or heterogeneously, but in either case, we give one teacher 25-35 students; finally, when we have time, we think about individuals; usually these are the ones who cause some kind of discipline problem and are disrupting the organization. Once they are taken care of, we look at a few honor society students, even though honor societies should be eliminated. Usually we run out of time, so the rest of the students are never diagnosed as individuals.

State departments of education have been just as bad. They have their bosses; they have positions for finance, administration, regulations, requirements, certification; these have been the most important departments. Under them have come various sub-departments concerned with Indian affairs or audio-visual equipment, or early childhood, or curriculum. Those people responsible for actually improving learning in the classroom rank low on the totem pole. It is no wonder students are rebelling. It is no wonder we are hearing about students' rights. Many educators are beginning to strongly agree that if the present schools continue to exist, organized as they are, students should peacefully rebel, and rebel in a hurry.

Schools should meet the student first and then prescribe, in conjunction with the student, the kind of program best suited to the needs, interests, and abilities of that student. He should be placed in a group only when being part of a group seems to have some value for each of the individuals. The school organization should be formalized only to the extent that it makes it possible for individuals to work independently, and for groups to organize easily. The process of determining the organization, placing students in groups, and never having time for individuals, MUST CEASE.

A school developed around a personalized philosophy needs a structure which provides for a large pool of individual students; the question then is what are the needs of each student in this pool in the areas of the cognitive, affective, and psychomotor domains? The individual becomes the first priority; daily smorgasbord scheduling thus becomes a necessity if a school is to operate from a pool of individual students.

On a flattened organizational line and staff chart, if we are going to pursue such an individualized concept, the school must have a director or consultant for on-going innovation, for future planning. He is responsible to see that this pool of individual students is diagnosed and prescribed for individually, and that students' rights and desires are taken into account. Optional attendance and self-selection of courses and daily schedules force such an effort. He is assisted by a Design Team. This Design Team consists of instructional leaders and students who act on proposals submitted from various members in the school, either students or teachers. In a large school, the consultant for on-going innovation and future planning is assisted by an associate or associates for learning resources, individuals who have as a prime responsibility, the improvement of instruction in the classroom. The teacher-consultants, working with the future planning consultant, and the associates for learning, are loosely confederated into a large learning team. The teams interrelate the curricula; there are no individual departments and unrelated curricula; interdisciplinary efforts supersede departmentalization. Experience seems to indicate that at present the best way to begin an interrelated curricula is to organize the school around area centers: the math center, the art center, the music center, and other. This allows for development of a strong continuous program in each area. The way to start interrelating them is to identify courses that students and teachers plan where it makes sense to work together as a team. Examples of these are Theater Arts, where art, drama, music, and many others can work as a team; Business Systems where the former math and business areas work as a team; American Studies where English and social studies can combine; and such combinations as physics and industrial arts, and physical education and outdoor education. Combinations are almost limitless. It seems best, though, as a starting point, to house area centers in relationship to past conventional combinations. Thus art can be in physical nearness to industrial arts, music, and drama. Schools moving in these directions are finding success in interrelating curricular experiences for students and teachers.

Three of the major deficiencies in organizations of most state departments, school districts, and schools are lack of planning, lack of research, and lack of necessary leadership personnel. Practically none of the school districts provide money for long-range planning and development, or for research and evaluation. Yet the innovators are discovering that these are two key areas. There must be additional leadership to accomplish research and planning, as well as persons responsible for achieving other change goals. Schools use a number of different titles that can be a tool for identifying these leadership personnel in schools, school districts, and state departments: Planning and Development, Learning and Curriculum, Research and Evaluation, External and Internal Affairs, Research and Development, Resources and Technology, Learning and Instruction, Structure and Planning, Learning and Counseling, Information and Reporting, and Team Coordinators are a few of the titles given leadership and/or Design Team members. Some are simpler such as Future Planning, Research Systems, Dissemination Programs, Human Relations, Student Services, Learning Resources, Special Projects, and others.

The important factor here is not the title they carry, or whether they are full or part time; the recognition is in the fact that their functions are crucial; unless the educational organization has exciting, innovative, committed leadership giving direction to areas of change, the attempt generally will fail. These personnel can usually be provided for, at least on a part time basis, within the current budgets, by reallocating finances. The district, or school, or state which is going to successfully change especially overstaffs in the leadership area during the first two years of change. On-going innovation demands constant committed leadership, but after the first huge push, functions can sometimes later be combined during a plateau period until the organization is ready for another tremendous push.

Thus, if any school is going to significantly change, it must rely heavily on the impact of the leadership available. The innovative school leaders accept as a primary responsibility the achievement of successful change. There seems to be a high correlation between support of change by the principal of the school and innovative teaching. For example, the innovative principal surrounds himself with a supportive group of teacher change agents. They help form the school's Design Team. Others, who are not on the Design Team, but equally supportive, free-lance their influence by changing their classroom procedures and discussing them over coffee. In the better schools, faculty advisory teams are now becoming faculty decision making teams. The good principals are turning over to teachers much of the running of the school. Teacher participation in organizational decisions is becoming one of the trademarks of an effective school. The Design Team, the Faculty Advisory Team, the Student Council and/or Student Advisory Team, and the Director should all have designated decision making areas. Generally the Principal or Director should hold veto power over most policy decisions, but these should be subject to override and appeal.

The management of the school (management is probably a better term than administration, as the former involves risk taking and the latter relates to nuts and bolts), the "consultants for innovation" in the "going" schools, make very few decisions. They lead in the selection of personnel, in the allocation of resources, and in asking hard questions. But most of the decisions are made by the teachers. The minutiae should be handled by assistants hired and trained for that position. Certainly arranging for buses is important; buses, unfortunately, still affect curriculum development and school activities, and ultimately school morale. But the innovation leader should not take time to arrange for buses. Some of these types of supportive decisions need professional judgment, but many can be handled by para-professionals.

To accomplish this organizational philosophy, obviously schools must be staffed differently. No longer can a school operate with one principal, one assistant principal, and 50 teachers. Some of the teachers must be "prescriptive," "doctor" teachers. In other words, some teachers on the staff must have seven to eight years of training, must be employed on a 12-month basis, and must be able to diagnose and prescribe the educational needs of boys and girls. They are the fine teachers who can spend 24 hours a day on school problems.

A second category of teachers should be "nurses." They work nine months a year and usually an 8-4 day. They might be excellent teachers, but ones with families and not enough time to devote full energy to school. They might be poorer teachers who need to work with more qualified persons, or they might be potentially good, but young and inexperienced teachers just out of college.

In addition to the "doctor" and "nurse" type teachers, there is a need for "nurse's aides." These teacher aide para-professionals may serve instructional, clerical, supervisory, or special roles. Finally, there is a need for trained specialists on the differentiated staff. Hospitals have blood, X-ray, and other laboratories, under the direction of an M.D. Schools need help in the areas of psychological, sociological, and physiological evaluation. Additionally, schools need "candy stripers"--parents or other types of volunteers from the community or older students in the school.

The present principal-assistant principal-teacher method of organization may be satisfactory for the conventional school; it may enable the status quo to function. But it is not the kind of staff needed to achieve change, nor to provide for on-going innovation; differentiated staffing is one of the possible answers to new leadership arrangements in schools.

The Design Team discussed earlier coordinates the efforts of a school with a differentiated staff. This Design Team, besides having people qualified in the role assigned, such as research, or resources, or curriculum, must also be planned to provide for a true TEAM FOR INNOVATION. The Design Team definitely needs different types of personalities, and different roles for those personalities. There must be individuals who use "power" methods in change--the more dictatorial or "do it" approach; there must be individuals who prefer the re-educative approach--the let's sit down together and work out a plan that can allow the group to reach a consensus; some on the team must prefer the "rationale" approach to changing people--doesn't it seem that if we could do it this way, we could have a better school?

The impact of change and innovation at the classroom level has been disappointing; in most of the so-called innovative schools, there seems to be little difference in what is happening when the teacher and the learner get together. One of the real criterion for change is to investigate carefully what happens to Johnny in his relationship with Mrs. Jones and with the learning which occurs, regardless of the method of scheduling which got him there.

As has been indicated, the dynamic leader in the exciting schools today surrounds himself with the described Design Team. Besides their component roles, and their methodology, the team needs personalities who operate with describable, though not always conscious or planned techniques. For example, the team might consist of the following kinds of people.

One type of person who is usually desirable is a needler; he or she is constantly fussing about the need for improvement in what the school is accomplishing; a second person should be a dreamer, one who is constantly thinking about ways the school could be made better, assuming the needler is right; a third person should be the developer, who sees his responsibility as that of implementing some of the changes the needler and dreamer have planned; a fourth should be a searcher, who attempts to analyze and evaluate whether the teacher-learner situation is any different; a fifth is a percepter, a psychologist who knows learning theory and who also can help solve personality disputes when blocks develop between individuals over the issues of change and potential improvement; and finally a stabilizer, a handholder, a person who can hold the organization together and who is trusted by the more conservative element in the group to make sure that the organization will not go too far off in left field before the evaluator has a chance to determine some of the impact of the change on the classroom.

Examples of the team use of the power, the re-educative, and the rational kinds of approaches to students and teachers in the organization can be illustrated: the needler may speak more from the dictatorial point of view--that this is what we are going to do because we must. The dreamer may operate more from the rational point of view--in other words, he may say it appears to me that if we could just do this, it would certainly seem that we could improve what we are doing. The implementer may operate from re-educative techniques. He may sit down and discuss individually and in small groups why these changes might be desirable, and how they could benefit the students.

In addition to the Design Team, most all the teachers in the school should be organized into teams. But the teams should be different than those we now have in most teaming schools. Instead of consisting of six self-contained generalists, the team should consist of people with special talents. Some of the team members should be potential actors; they are the ones who usually are excellent at large group presentations, at appearing before the students, and at preparing motivational materials to arouse the interests of the students. Others on the team may be primarily writers, people who are excellent contributors to education, but rather than lecturing to students, might contribute most of their time to writing materials for the teachers to use. A third type of teacher on teams should be the organizers, those who can sit down and figure out how they can move a student from here to here, or that group from there to there, with a minimum amount of confusion and maximum efficiency. A fourth type of teacher on the team ought to excel as discussion leaders. Some teachers are very poor at large group, but are excellent with small groups of children. Then we need helpers on the teams; these are teacher aides--para-professionals of various kinds--who assist the teachers; finally we need the creators--those who have new ideas, who can sit down and say, "Maybe we could do it this way." All should be fairly effective in one-to-one conferences with students.

In most present school organizations, we look for teachers who are generalists, who handle discipline, and who know their content. But in the very near future, probably three-fourths of the population will be working on products not yet invented. What methods are really of value, what is it that teaching teams should organize to teach? What kind of support do teaching teams need? As one example of the need to reorganize teaching teams, look at the area of graphic arts; how many schools have one or more graphic artists employed on the staff--only a few throughout the United States. If a school does not hire a professional graphic artist, it certainly should have a housewife type visual technician--a person who works at para-professional wages for six to seven hours a day, who has amateur artist talents, and who can cooperate well with teachers. This person is available to make transparencies for use on the overhead projectors, filmstrips, slides, and other such devices. With this type of support, either on the team itself, or available to the team, depending upon the size of the school and the team, improvement of large group presentations and independent study occurs almost immediately. But very few schools have this type of talent available to teachers, and because many teachers lack talent in the area of visual arts, unless there is someone to make the visuals, or unless they can be purchased, they just aren't used.

In the discussion of differentiated staffing, the need for staff associates was mentioned. We need learning and problem specialists available for immediate diagnostic assistance. This is especially true at the traditional pre-kindergarten through third year levels. If a child finishes "grade 3" with serious deficiencies, he is usually lost as far as his future traditional school work; he is usually the remedial reader, in the slow group, and often a discipline problem and pushout at the high school level. Schools and school districts, or a confederation of school districts, depending upon size, should have full time people concerned with learning, curricula, emotions, perceptual-motor problems, home environments, and physical conditions. Most schools have no access to immediate help from psychologists, sociologists, and physicians. If they must rely on overcrowded mental health clinics, the child is sometimes able to have an appointment in three to six months for diagnosis only. Very little time for treatment is available, and cost of private consultations become prohibitive the way we are organized now. If school districts have part or full time psychologists and sociologists, they are usually few in number, and their load usually makes instant feedback to teachers impossible. Availability of physicians, in most cases, is through the family, and sometimes not possible at all if financial or cooperative environments are not present. School budgets must be re-allocated to provide immediate diagnostic assistance to teachers.

This immediate need for diagnostic assistance is easily tied to the plea for a Design Team, and for special field leadership. The instructional leader for curricula and learning must be freed for just that. He must be aided by leadership in research, resources, and learning content and methodology. There must be organizational leaders to see that the entire structure fits together. The traditional patterns of school staffing, organization, and leadership all need drastic revision.

As just a brief example of what can be done to implement changes in teacher assignments with the same budget and staff, here are just three of six or seven possible different types of elementary school team organizations, considering at this time only their primary content area assignment. One arrangement could be called the specialists team; in this plan, each teacher is responsible for only one subject field, but usually will teach it on more than one "grade" level; this is not departmentalization, but is teaming as long as the teachers of the various subjects meet often to talk first about boys and girls, second about the learning experiences needed by these boys and girls, and finally, the organization which will best provide the needed experience and environments. As each teacher knows each student, it is quite easy and quite effective for the teachers to plan a personalized and individualized approach to education; each professional is able to contribute personal insight as to the developmental needs of the student, and thus provides opportunities for group diagnosis and prescription. Teachers working in this system get to know large numbers of students better than they ever knew their own small group of students before.

An offshoot of this specialist arrangement is the semi-specialist team. This is effective in small schools where complete specialization may not be possible or desirable. In this arrangement, each teacher might work in the areas of language and math, then specialize in a third area such as science, social studies, or art.

A further arrangement is the non-specialization team. Here each teacher assumes leadership or "head" teacher responsibilities in one subject area, but then teaches in all the areas. Though at first this plan seems desirable, on closer examination, it means that all teachers must continue to teach twelve separate areas. Industrial arts, physical education, science, art, and music are finally being accepted in the elementary school as on a par with all the former magic areas. Most of these subjects cannot be taught effectively by presently trained classroom teachers; further we are finally admitting not everyone in the elementary school is a good reading teacher. By allowing elementary students to select their own study areas and teachers, schools are immediately forced into a new type of structure.

As we explore elementary school organizations, it becomes quite apparent that there are seven or eight arrangements which are as good as, and in most cases better, than the old self-contained rooms. It is essential that we continue to search for better learning environments than the 120 year old Quincy Box.

As the faculty studies new approaches to learning, certainly the guidance and counseling programs are going to be forced to change. We can no longer tolerate guidance counselors who are really no more than glorified clerks, whose main jobs are to see that students have enough credits to graduate, to help make college applications, and to figure

G.P.S.'s and class rank. Instead we want facilities that are considered counseling centers, where large open room areas are furnished with carpeting, soft furniture, soft music, and hot chocolate and cold drink containers; here the counselors work in an open environment, and are available to interact with students when the students feel a need to talk to an adult who serves in the role of a counselor. Further, counselors should be part of the teaching teams. We want them to sit in on team planning and discuss the problems that teachers are having with individual students. We want them to work as part of an instructional team so they will occasionally present large group, small group, and independent study materials related to counseling and guidance. We want them to work in the student center where they can talk informally with students over a doughnut and a cup of coffee. We want them to be known by students as human beings, and not as somebody seen only when there is a problem. We want the counselors involved as diagnosticians and prescribers. We want them to suggest those who need more structure, and help to develop a structured program for the students needing such a plan.

Right now it is almost impossible for the majority of students in a school to see the counselor. The student must go to the secretary first, because the counselor is locked in a cubby hole behind a closed door. Usually the student has to make an appointment with the secretary and wait for a considerable period of time before he or she can get to the counselor; then when a conference is arranged, it is behind a closed door, where the counselor sits behind a desk, as a voice of authority, rather than in an atmosphere which lends itself to a friendly open kind of discussion. What we should do in most schools is tear down all the walls around the present counselor cubby holes and develop an open environment conducive to interaction between students and adults. Private conference areas are still available if really needed. This certainly involves the counselors in a more human relations approach toward the curriculum than that now existing in most schools, where counselors are concerned about requirements of the school as their first effort, and then toward trying to fit students into slots in group-paced courses, depending upon whether they are smart enough to be in track one, or whether unfortunately, they are problem learners and therefore are in slot three, and must be dumped into art and industrial kinds of courses, as if they were not academic.

Some states do not think art, music, home economics, business, and industrial arts are important. They do not require them for a diploma and give only limited credit for some of the courses offered in those areas. This is typical of the kinds of archaic thinking which goes on in many levels of the state departments and generally by most educational administrators. Courses should not be required in high school, but if they are, why are English, social studies, math, science, and physical education important and the others not? Secondary educators are still guilty of perpetuating grievous sins caused by the almost unbelievably obsolete college admission practices and the national testing services. Heavy reliance on ACT and SAT scores have caused the school program to follow a pattern suited to practically no one, especially to non-college students who are nevertheless dumped into required social studies.

Look at the American College Testing program. They measure only English, social studies, mathematics, and the natural sciences. Why not art, or child growth and development, or industrial education. One of their 1969 sample questions asks: "When Western Europe was cut off from some of its Middle Eastern oil by the Suez crisis in 1956, most of the petroleum deficit was made up by the United States and F. Canada G. Eastern Europe H. Indonesia J. Venezuela." The plain blunt response should be, "Who the heck cares? Punch a computer button or look in a book." Why should students of all walks of interests and abilities stuff such irrelevant nonsense into their memory banks? Greater reliance must be based on school decisions made through individual concern for each student as determined cooperatively by the student, the teacher, and the advisor.

The process of having each student select his own teacher-counselor as an initial contact person, and then having these teacher-counselors interact with the trained guidance specialists, sociologists, and psychologists has proven to be of tremendous value.

Related to counseling, schools must consider the use of some types of sensitivity training for both students and faculty. If we are going to work as teams, and if we are going to work at personalizing education, some teachers and students may benefit from a type of group interaction. It is sometimes difficult but we must reach a point of internal comfort if we are to work with others in small groups. Team relationships, self-discipline, and seeing one's own image in group situations become important as the new school organizations are developed.

In organizing to make some of the changes suggested thus far, schools must set priorities. The first priority is to develop, as we have said before, a commitment and a philosophy which says these changes are necessary. Then the staff must determine what are the key priority changes which must be made in their particular school. For example, some may feel at the present time that their three greatest needs are to develop new resource centers, to eliminate group-paced instruction, and to start a number of brush fire projects--pilot type attempts where kindlings throughout the district may hopefully reach a bonfire stage in the near future.

In most of the school districts we have had a philosophy of we would like to, we know we should improve the schools . . . but . . . . Then we go ahead and list all the reasons why we can't. No money, colleges won't train teachers, lack of in-service preparation, no time, state department won't let us, the board won't buy the idea, and, and, and. What we must do now, is to try a philosophy which says, we MUST make these changes; therefore, what are the priorities, and what are the steps that we must take to implement the priorities and thus improve the schools. Superintendents already claim that they are doing this, but most really are not. They are only working to improve the status quo--to add a classroom or a music room, to buy new textbooks, to build a new high school, to hire better teachers, or to revise the 10th grade English program. Though these efforts are usually useful and needed, they do not go far enough; they are not real change; they only improve the old model; the forward looking schools in America are not just refining the old--they are developing new ones; they have adopted a philosophy of, "We must; therefore, what are the steps and what are the priorities that can be immediately considered?"

In identifying priorities, some schools have chosen to look at curriculum as an individual program, not as a group matter; if this becomes a priority, a further concern would be to develop individually paced materials. The Individually Prescribed Instruction program coming out of the University of Pittsburgh is a step in the right direction; though it was implemented rigidly in the beginning stages, it does offer a beginning breakthrough to eventually having materials available for a more individual approach to education. However, it will be several years before all the needed programs are ready from the commercial market. Because we cannot wait until 1975 to individualize instruction, or for the commercial companies to develop materials, innovative teachers and school districts around the country, concerned with this problem are trying to write materials of their own; these will help individualization. Some are using contracts, mini-pacs, capsules, or other similar plans suited to the particular teachers in that district. One of the interesting attempts has been the UNIPAC, "a self-contained kit designed to teach a concept, structured for the individual, for independent use in a continuous progress school program." The purpose is to enable teachers to individualize instruction in a continuous progress, self-paced program. There are a number of steps which must be followed in the UNIPAC, but essentially the content includes a major idea and component ideas, learning objectives clearly stated in behavioral terms, a pretest, diagnosis, prescription and alternatives, diversified methodology and content--such as large group, small group and independent study--basic depth and quest units, student self-evaluation methods, and post tests. The UNIPAC is designed to be self-instructional and to be used in a flexible school system. As teachers of a new school look for a curriculum organization that will allow these new developments to proceed, they must look at programs such as the IPI or UNIPAC efforts. However, neither should be adopted across the board. Neither are "the" answer, but they are partial solutions to present conditions. Part of the curriculum revision, as related to organization, is to enable the staff to consider differing learning philosophies and psychologies. They should consider logical thinking, discovery, inquiry, and new notions about early childhood education. Most school districts have not developed a method of systematically informing teachers, analyzing various learning psychologies, and evaluating the subsequent curriculum developments.

As teachers organize for curriculum change, they should look at all of the new curriculum projects being developed around the country, and all of the new materials being written by textbook companies. Part of their awareness in reviewing these is to realize that most of them are still written for group-paced instruction; thus the staff must make a decision as to whether the materials are worth using. To do this effectively teachers should have some kind of model to follow as a process for curriculum decision making.

Staffs should ask which one, which ones, or which parts of which projects and publishers materials make sense in their particular situation. A school should not adopt only one of the current group-paced projects or present individualized efforts. None are the final goal. But each of them generally have merit, and overall, the national projects of the past few years have been much better than the old textbooks. A tragedy of selling project materials to publishing companies is that they have become the new textbooks. They don't yet provide the basis for individualization. The innovative districts are still adopting the project materials, but then must revise and adapt them; generally the new curriculum project materials are superior to a staff attempting to write their own; in almost all cases, the team of national writers can do a better job than teachers in a local school district; availability of time, money, and human resources usually make the difference. Local schools should revise them for individualization.

Several groups in the United States have been working to develop specific criteria for the selection of curriculum materials; at present it seems that there are perhaps about ten general criteria which educators should consider as guidelines for the screening, selection, and adoption of new materials and programs.

The first criterion is, needless to say, to identify the curriculum PROBLEM which may exist in the district. Are the teachers and students really concerned about the present curriculum? Is there really an inciting factor which might lead to a desired change? What are the antecedents to the particular curriculum problem faced? Are there dissatisfactions? Before proceeding further, those suggesting the possibility of curriculum revision should be sure they have had it identified as a concern of those involved.

Criterion number two can be called ASSESSMENT; here the priorities, the strength of the involvement, the total process of how the staff is to analyze the problem, possible solutions, the resources available, and the questions of why might we want a change, and what we may want to change to are considered; these all fall under a category best described as assessment.

What we are saying is that to intelligently make decisions about curriculum, a school must follow some type of model which contains specific criteria to help the staff reach a decision. A different plan for selecting curriculum is part of the new organizations found in schools. If criterion one was to thoroughly identify the total PROBLEM, and if criterion two was to ASSESS the process of making a change, then certainly three must be that of DIRECTION. The teachers should identify a philosophy toward curriculum; they must determine their curriculum objectives; they must consider what kind of a program they want in their school, what procedures they will follow in developing this program, and how they are going to evaluate the direction they have chosen.

The fourth criterion is that of AVAILABILITY. Once the staff has identified a curriculum problem, they have assessed their own particular situation, and they have considered the direction they wish to take, they must look at what curriculum possibilities are available. They must search the literature, look at lists and sources, contact and study the various projects, become involved with publishers of materials, and investigate the authors of the materials to determine some credibility toward the objectives of the program.

The fifth step is simply titled LEARNING. Here the teachers must look at the assumptions that have been made in the materials they are surveying, they must look at how the writers considered the learner and the learning process, what taxonomy of objectives were involved, and what research was relied upon in developing their materials.

Criterion six is that of CONTENT. Is the content proposed in the new package really relevant; what about student motivation? Is the content interdisciplinary? Is it individualized? Is it openended?

Criterion seven considers the ENVIRONMENT in which the materials are to be used. Do the materials consider the social realities of the existing situation? Do they blend with the programs already in use in the school district? Will the proposed new program fit the current organization of curriculum in the school? Does the program fit with the community prestige expectations?

Criterion eight suggests a look at the PRACTICAL factors involved in developing curriculum. What about the cost and the staff needed? How much time is required for in-service? What incentives are there to the staff? What are the facilities needed for the program?

Criterion nine is then the actual process of making the DECISION--an analysis of what the various programs which have made it through the elimination and comparison steps of the first eight criteria offer, and a decision as to which one or which ones or which parts of which ones might be appropriate for the district. As these evaluations are made, a discussion ensues as to whether this program or that one should be adopted as a pilot or total program in the district. Finally a decision as to whether to go or not to go with the particular program is made. The curriculum under consideration could have been eliminated in step one, or two, or anywhere along the way through the criteria cycle for curriculum decision making. It could be that one of the proposals got as far as criterion nine, or perhaps several made it that far. Step nine then becomes a crucial decision. If the curricula under consideration gets past number nine, it is now ready for implementation.

Thus criterion ten is that of ACTION. Once the decision is made to accept a particular program, in-service training must be undertaken, the program must be implemented, there must be wide dissemination of the program, there must be feedback, and there must be on-going evaluation and further in-service. The tenth criterion leads around to criterion one again, to complete the cycle and start the re-cycling. In other words, there must be arrows running in a continuous circle from the PROBLEM, to ASSESSMENT, to DIRECTION, to AVAILABILITY, to LEARNING, to CONTENT, to ENVIRONMENT, to PRACTICAL, to DECISION, to ACTION, and back to PROBLEM again. This organization becomes an on-going process which continually looks at the district curriculum. At each of the ten points, evaluation is an important factor; review must accompany each step. Decisions are made in almost all of these stages based upon evaluation. It might be that the search for new music curricula may stop at step four, if in searching through AVAILABILITY the teachers find that there is nothing really new or nothing that they are not already using or aware of in the district. On the other hand, in the area of social studies, a group may continue all the way through the ten steps, actually implement, and then eventually revise the materials that were first adopted, as a result of continual re-cycling.

Completing the model for curriculum decision making is an indication that at each one of the criterion discussed, sub-topics and discussions can be pursued. Under the concept of ACTION, implementation discussion could ensue; for example, in implementing a program the June to September period may be considered the preparation period. This is the time when the district actually purchases the material they have decided to use; they study it, they have a consultant in, they study it again, and they start using it From October to January, the reinforcement period occurs. The staff involved reviews the successes and failures of the program, they revise methods, their consultant returns to help, they visit other schools possibly using the material and they attempt to refine the program. Finally from February through May there occurs an evaluation of what has happened during the year. Individual as well as group and regional evaluations take place; there is feedback to the original decision and plans are made for the following year. Actually then, this idea of action implementation forms a complete cycle where June through June people are involved with implementing and revising the curriculum materials; within this breakdown, emphasis is placed on various phases during particular months of the year.

When it comes to disseminating these decisions, such steps as planning conferences, hiring diffusers, writing publications, sending out invitations to visit, providing observations, arranging demonstrations, holding workshops, offering consultations to other districts, loaning materials, and making visitations can aid in the actual dissemination of the new materials within a large district or to other districts who may be wanting to learn of the new curriculum adoptions.

How many people agree that the organizational changes suggested in this chapter--changes in staff, in leadership, in curriculum decision making, and all the others proposed in other chapters, are really important? How many agree that they are essential? How many are even willing to consider the possibility of some of these notions being implemented in their schools? What chance, nationally, do we have to win the battle to revise the educational system?

As has been indicated, at the present time about 30 per cent of the educators, parents, students, and interested laymen are in the involved stage. They are the ones who are now either deeply committed to change or who are involved to some extent, even if it is just a fringe effort. Some may be latecomers to innovation, but at least they are trying even a minor kind of pilot study. Even though probably only 10 per cent of the population is deeply committed or deeply involved in change, there are about 30 per cent of the population who can see a need for a new kind of school.

There are about 40 per cent who are still sitting on the fence watching. They are not necessarily against change, but they are not for it either. They are sitting back to wait until it can be proven, one way or another, which way is the right direction.

About 30 per cent of the people in the country today, educators and laymen alike, are resisting change. They are convinced that what we are doing in schools in terms of new organizational patterns and all the other changes that are taking place are absolutely wrong, and they are doing what they can to prevent these new ideas from being developed.

Is this 30-40-30 position a bleak outlook? No, because about five to seven years ago probably only ten per cent were involved at all in any shape or form. About twenty-five per cent were on the fence watching; they were at least willing to take a look at what might be happening to schools. Another sixty-five per cent were resisting. As little as five years ago, those willing to consider change were still a minority. At least we are now in a position where a majority are willing to talk about and listen to presentations about new ideas in education.

Unfortunately, two negative items still exist. One is that most so-called innovative schools are still really in the talking stage, or have only made surface attempts at change. Another problem is that school districts and schools think they must have a majority to change. This is not true. Start with the 30 per cent who are ready, and let the fence-sitters be won over slowly by example and observation.

What about the future? In another five or ten years probably about 70 per cent of the educators and lay people will be involved in some kind of educational change. They will at least be trying a few things. The 30 per cent now involved in extensive change will truly have individualized, continuous progress, self-paced kinds of programs. They will be at the forefront of the schools we are trying to create now. The 40 per cent fencesitters will have moved into innovation circles by then; they will still be at the fumbling stage, the one so many are groping with now. About 15 per cent will still be sitting on the fence watching, and another 15 per cent will still be resisting; but there will be a definite acceptance throughout the country toward involvement with the ideas and people which may produce the schools of the future.

More and more we are realizing that in the first year of change, the "dictatorial" method works better than the group involvement one. How can the teacher vote whether to adopt a change if she has never experienced a situation where the proposed change has been practiced. Many of the innovative schools never really get the change going that they could because they seek group consensus involving persons who know nothing about the topic, other than what they have read, heard, or visited. It is usually best to "plunge in" to the change and work hard to eliminate the bugs week by week, rather than to "academically" study it and vote it down. Group involvement and decision making is better after the teachers have experienced the change; thus they eventually control its development, but the initial decision to adopt the revision is made in a dictatorial manner by the director of innovations.

A key factor in organization for selecting and implementing innovative changes, and one that too many schools overlook, is that teachers need time to dream. This has always been a deficiency in schools; teachers have not had an opportunity to dream. They are with the students all day long. With flexible scheduling and team teaching, 25 per cent of the staff can be released at any one time. This gives the teachers time to take Thursdays off to dream, and to prepare materials, and to make decisions. This is a major reason why a new organization in the schools is so essential; we need a structure which will allow accomplishment of things never before possible in the educational system. Teachers at many innovative schools are urged, forced, convinced to take several days away from school to think, plan, rest, work, and change the pace.

Unfortunately, the whole matter of the organization of schools--whether we are talking reorganization and combining of several districts, or organization of only one district, or organization of a school, or organization of the curriculum within that school--will not be successful in any community or state unless four elements begin to work together better than they have in the past. As one of the four elements, the universities must become more involved with innovation. They must help to prepare future teachers and administrators for the kinds of schools which we need now, and for the coming 70's and 80's. The universities have been a bed of conservatism. They are the best example of poor teaching. It is time the universities become powder kegs for change.

The state departments are a second element that must change. They must assume leadership and a philosophy that says we must encourage schools to innovate and develop exemplary programs to help boys and girls. The focus of the state departments must be on the classroom, not on certification, finance, and administrative trivia.

The public schools, who obviously must join in a partnership with the universities and state departments, are the third element in the picture. The schools cannot change without help from the universities and state departments. By the same token, the universities and state departments cannot change unless the schools are in tune with what professors and state departments are advocating as necessary improvements.

The fourth element is the political arena, the legislators and the school boards. No matter what we as educators may desire to do, unless the school boards and the legislatures can see the desirability of the change, and give the support we need, change will not occur in the given state. Most states have not had the support of the legislators and school boards in terms of organizing for change in education. It is time that we develop new approaches toward working with the political leaders in the communities.

Schools must organize for change. This chapter is not theoretical; we must make practical application of new methods. But no matter what area of change is of concern at a particular moment, there must be a planned organization in the school to carry out the proposed adoption. As we work in individual school situations, we must remember that unless the universities, the state departments, the schools, and the school boards and legislatures work closely together, all the theory of organizing for change probably will be of little value; but with cooperative spirit, new organizations in the schools can truly achieve exemplary programs for the boys and girls in the classrooms now and in the future.

Chapter 6

CREATING SPECIFIC PROGRAMS

The theme of this particular chapter could be "Let's Get on With It." We have envisioned the kinds of changes we might want to make. We have challenged the need for these changes, have developed a rationale for ongoing innovation, have been involved with planning processes, and have described the kind of organizations needed to accomplish the tasks. Now we are ready to create and implement specific programs.

The day by day nuts and bolts implementation of these changes which have been planned demands a school-wide team approach. The community, board, students, administrators, teachers, and specialists should be involved in or know about the effort to improve the school. In this book, change means different, and different hopefully means better.

We have said that if we are truly going to change a school, to make it significantly different, we must create about 63 revisions (about eight to twelve of them in each of the six components of the school: philosophy, instruction, learning and curriculum, structures, technology, and reporting.) In this chapter it is not possible to present in detail step-by-step procedures for implementation of all 63 revisions covering six different components. Therefore, there shall be no attempt to cover the waterfront, but rather to discuss both generally and specifically the implementation of three of the 63 and touch on many of the others that closely relate. Learning to create these three will enable a staff to create the other 60 or any other ones they wish to develop. The techniques for creating are the same. The three which will receive concentration here are daily variable and daily smorgasbord scheduling, student freedom and responsibility, and individualized instruction and learning.

In the realm of scheduling we will not use the term flexible or modular or flexible modular scheduling. The first term was misrepresented by bandwagon schools, and the latter two now generally refer to only one kind. Further, the conventional interpretations of these terms are obsolete. Flexible scheduling first became associated with schools like Brookhurst in California and Canyon del Oro in Arizona, and even in the early stages to schools in the Stanford program. The term meant a school had a unique time schedule which provided for unique teacher and subject area demands. Brookhurst and later Brigham Young University created the Daily Demand Schedule. Canyon del Oro developed a Daily Variable Schedule; the GASP scheduling format, later modified at Stanford, became the modular flexible schedule.

Unfortunately, schools all over America are now in the process of adopting modular scheduling. As it is known in most of the United States, it is an offshoot of the Stanford development which is really an inflexible-flexible schedule, as it provides only five master schedules; these five are better than one but represent rigidity in scheduling. In order to be truly flexible, schedules must be built on a daily basis as a minimum effort. Certainly there will be even more of a breakthrough in the near future, maybe even hourly offerings developed by the computer. Whatever happens, though, daily smorgasbord scheduling, such as is being developed in the Wilson School, is going to provide the framework which will challenge the imagination.

But the purpose at this point in the chapter is not to argue the merits of various types of schedules, but to show how to implement a change to some type of "flexible" schedule. For these schools now on modular scheduling, the same steps can be applied toward switching to daily smorgasbord scheduling; there is almost as much difference between smorgasbord and modular scheduling as there is between modular and the old 55-minute period. Variable type schedules are appropriate for all levels of development--in the conventional first or twelfth years. Change in scheduling techniques is just one of the 63 or so revisions necessary in the schools; by itself, variable scheduling is worthless--it is only a way to manipulate time. On the other hand, complete implementation of the other 62 is impossible without some type of variable time arrangement.

In this chapter related to creating specific programs, some attempt will be made to show how the suggestions presented in Chapter 4, PLANNING FOR IMPROVEMENT, can be used in a practical situation to actually implement a new method. However, the major focus is an attempt to explain some starting points for the implementation of innovative scheduling, student responsibility, and individualized learning and instruction. The keys here again are commitment to change and long hard hours of work and frustration. If creative educators are convinced the innovation makes sense, they do not need a cookbook. They take the commitment, some general knowledge about the change, and add their own creativity. Change is easy if you are willing to work at it.

Perhaps one way to begin this chapter is to present some of the reasons why a daily variable schedule is desirable, remembering that in implementing changes, each of the 60 or more revisions proposed in this book should usually not be attempted until they have been first evaluated by submitting them to the test of the ten steps suggested in Chapter 4. If the innovation is planned that carefully, it usually succeeds; but if it is haphazardly put together or adopted through the bandwagon effect without a real commitment to the basic philosophy of the change, it usually fails.

Referring to Chapter 4, then, the first guideline was that there must be committed leadership. This is especially true in the area of daily scheduling. The principal of the school must be committed to the notion that this particular type of schedule can improve the learning conditions for boys and girls. He must be willing to become involved in the extra work and the frustration that will accompany the implementation of a daily schedule; he must be willing to break traditions.

In developing a variable schedule, the leadership should consider the best way to proceed. Should they involve all of the staff or just part of the staff the first year? In a new school, that is, a brand new building constructed especially for teaming and innovation, the entire school should adopt variable scheduling immediately. If it is an old school with an established faculty and clientele, the principal may have to work the first year to involve only thirty to fifty per cent of his staff in variable scheduling, urging that the middle group watch and leaving the resisters alone. Remember, in the development of commitment the administrator cannot do it alone. He must surround himself with a portion of the staff who are also committed to the implementation of the innovation.

Part of this commitment to a new type of schedule is based on scheduling assumptions which the staff must accept before flexibility can become a reality:

1. Not all teaching jobs need be the same.
2. All classes in all subjects need not meet every day.
3. All classes need not meet the same number of periods per week or the same amount of time each day.
4. Students are capable of assuming responsibilities.
5. Learning is more important than teaching, and learning can take place without the teacher.
6. Substantial improvement must take place in the instructional program, and the teacher has an obligation to try to invent and experiment with ways to improve instruction.

If a core of the staff becomes committed to the possibilities of variable scheduling, suggestion two of Chapter 4 calls for the staff to read much of the available literature related to flexibility. During this reading they should try to answer a basic question; "Why have daily teacher-controlled variable scheduling? Should we adopt smorgasbord scheduling? Why would either be better than what we are doing now?" The answers that a staff would reach in posing such questions are generally summarized in the next few paragraphs.

Currently, most schools operate on a bus schedule. The central office determines when the buses arrive and when they can leave. Thus the principal says, "The buses come at 8:30 and leave at 3:30; I want a half hour for lunch. Well, then, that would give me enough time to have six or seven periods; let us have six 55-minute periods and a half hour for lunch. That will provide five minutes for passing. We can ring the bells right on the hour and at fifty-five after the hour. Yes, that will make a very good schedule." Then he says to Mrs. Jones as she returns to school that fall, "Mrs. Jones, we have the most wonderful schedule for you; you are going to have World Literature first period this year. This means you are going to have twenty-five children, five days a week, fifty-five minutes each day for thirty-six weeks. You cannot have any more than twenty-five because the schedule will not permit it. You cannot have any less than twenty-five because we do not have any place to send them. You cannot have any more than fifty-five minutes because that would mess up second period, and you cannot have any less than fifty-five minutes because that means we would have too many students uncontrolled during the day. You just enjoy yourself and have a good time with these twenty-five every day; the teacher goes into the room and says, "Isn't it wonderful boys and girls? This year the twenty-five of us are going to be together for fifty-five minutes each morning for thirty-six weeks. We are going to have a wonderful time studying World Literature. Won't our schedule be exciting?"

As she prepares her course, her basic question is focused around "What can I do tomorrow for fifty-five minutes to occupy the twenty-five students?" She should be asking, "How would I like to teach tomorrow? What is the best size class? What length of time would I like? Would I rather have it in the morning or the afternoon? What room would be appropriate and how could I evaluate the program?" In other words, the teacher should be completely free to determine whether she wants to meet the class at all, have five or one hundred and fifty students, have an hour and a half or only thirty minutes, in either a large group, laboratory, or seminar type room. These decisions should be up to the teacher and students, and to the teaching team which they are a member of, on a daily basis. It should not be determined by the teacher or administrator in the spring or summer preceding the school year. In conventional scheduling the administrator is saying that he can predict what an individual student needs the following April; yet he makes his prediction the previous April or at the latest, during the summer. He determines then that nine months later the student is going to need to be in a class of twenty-five students meeting fifty-five minutes from 8:30 until 9:25; the greatest tragedy of all this is that in the case of a transfer student, he has prescribed a remedy before he has ever met the patient. There is no defensible position for this kind of rationale. A staff which wants to consider a flexible schedule must read the literature and learn the types of possibilities and the philosophies behind them.

For example, as the staff reads about different kinds of scheduling, they must consider the type of program originated at Stanford and at Indiana, at McDonnell, and many others. They should ask, "What is wrong with the flexible modular program?" The answer is that nothing is wrong with that program if it is compared only with the bus schedule described above. The flexible modular programs are so much better than traditional scheduling that everyone should be on one if that is the best step that can be achieved. On the other hand, the flexible modular schedule has various flaws; it is really an inflexible-flexible schedule, but it has been a way for many schools to start. The problem with the modular schedule in most schools is that there are only five master schedules. If a teacher looks at her schedule one day in April, she may say, "Why last April did I ever request this kind of a program? Look, I have large group tomorrow, lab on Wednesday, and small group on Thursday. I wish I could change it." With a daily teacher-controlled variable schedule or a daily smorgasbord, it would be possible to change. Locked into a bus schedule or an inflexible-flexible schedule, it is almost impossible to make wholesale alterations in most schools.

Suggestion Three said to develop a philosophy; such a step is absolutely necessary when developing provisions for flexible scheduling. The teachers and administrators in the particular school must study carefully the advantages and disadvantages of this kind of scheduling, and then determine whether or not they agree with the basic philosophy. Do they understand that variable scheduling provides daily flexibility? The schedule can be changed to suit any particular need on any given day when the schedule is built daily, as one example of philosophical considerations.

They should understand that variable scheduling relieves boredom. One of the outcomes of daily scheduling, which was not necessarily one of the original reasons it was developed, is that students and teachers constantly have said that school is much more interesting, "because I do not have to sit in that World Literature class from 8:30 to 9:25 every day." One day the student may have World Literature at 8:30, one day at 2:30, one day when he chooses, and one day not at all. Variable scheduling does relieve boredom, especially when it becomes a smorgasbord type schedule where students self-select each day and have optional attendance.

Variable scheduling also makes time a tool. We must learn to use time wisely. Students and teachers both are no longer locked into a fifty-five minute period; they enter a situation where they can control their own time. They must understand that now that they can control time, they do not always need fifty-five minutes. The teacher may ask for only thirty minutes; the student may have a choice between eating doughnuts for thirty minutes or studying. Both must begin to learn to use time as a tool in providing for better learning opportunities.

Variable scheduling provides time for planning. Team teaching, time to dream, and interaction among professional staff are important in a flexibly scheduled school. Teachers need to sit around a table sharing interests, abilities, and knowledge; they should attempt to negate their weaknesses. The most flexibly innovative schools eliminate departmentalization in the high school, and they eliminate self-contained rooms in the elementary school. If we believe in the concept of individually prescribing instruction and operating in a big barn philosophy, then there is absolutely no rationale that calls for departments in secondary or self-containedness in the elementary schools.

Step Four in the planning process calls for creating a dissatisfaction. One of the areas that administrators and teachers have overlooked in planning to implement variable scheduling is that students must be involved. The students are going to make or break an innovatively scheduled school. If the students understand the why, what, and where, as related to the process of scheduling, and they agree with the new philosophy and become dissatisfied with the old, generally the new attempt will be successful. In fact, the students will even demand that teachers make it successful because they are so sold on it themselves. In order for change to occur, we must be dissatisfied with the present schools; and we must be committed to try to find a way to improve. One of the possible ways to improve is to adopt the concept of daily scheduling. A further dissatisfaction that can be discussed as part of guideline Four and one of the really big dissatisfactions in schools deals with their past inability to truly individualize instruction and learning, and truly personalize student programs. If staffs become dissatisfied with group-paced instruction, it is not too hard to implement forms of individualized, continuous progress, self-paced approaches. Here are a few examples from various schools throughout the country. These descriptions are not "the way" to teach each of these classes, or "the only way," or necessarily "the best way," but are illustrative of the different ways in which teachers might approach the old notion of individualizing instruction.

In the area of social studies, the following example might be found in a non-graded high school program. Students taking the class described may be conventionally called ninth, tenth, eleventh, or twelfth graders. It does not make any difference, for in this situation they will all be studying the same common thread. Here is a possible schedule for a two-week period of this type of teaching. On Monday of the first week the teacher may give a large group lecture, show a film, or bring in an outside resource person to discuss the topic "The Effect of War on Individual Nations." It does not matter if these students are ninth or twelfth graders, smart or dumb, tall or short, pink or green, or any other way we want to try to erroneously classify students; they are all affected by general mobilization and total war. Tuesday no classes are scheduled; the teachers use the day for planning while the students are involved in independent study activities. They are reading and searching for materials related to war as it affects an individual nation. On Wednesday half of the students may come to the teacher for small group discussion throughout the day, while the other half continue some more independent study. On Thursday the procedure is just reversed: the second half come in for small group discussion, and the others do some more independent work. On Friday the teachers make themselves available for individual tutoring and individual conferences.

The following Monday some of the students may be in lab and the others may be in small groups; on Tuesday this may be reversed. On Wednesday and Thursday the students might be involved in individual conferences, individual tutoring, or small group planning. Teachers have an opportunity those days for some reflecting and discussion among themselves. Friday all the students may meet in small groups. Over this two-week period, each of the students has been involved in one large group, three small groups, one lab, and several independent study or individual conference sessions.

This description, of course, is just a general picture of what many of the students might do. It assumes required courses and attendance. If a smorgasbord approach is taken, the above tight structure might never be used. Even with tight structure and required classes, if the program is really personalized and individualized, the students may scatter in completely different patterns; however, because they are all studying the same general broad topic of war as it affects a nation, they can be brought together for small and large groups and lab experiences on the basis of the common thread.

Their independent study can be individualized into many areas of interest and levels of ability. One student may study war through sociology--what happens to the family unit during war? Another student may view the topic through economics--what about inflation, shortages and other. Another student, pursuing the historical approach, may look at war in general throughout the history of the world. A fourth student may tackle the problem through political science, looking at decisions which are made in war which may not have been permitted in time of peace. Another student pursues war through art; for example, he may study paintings portraying the forces of war as they affect individuals and the nation. Another student could take a look at music and the kinds of music written during war and peace--is there a difference? A seventh student could look at war through the world of the theatre--how do the dramatists portray war? Another may look at it through the literature or poetry of the country and still another may tackle the affect of war via the technology developed, sometimes as a matter of survival. One other student may study war through several types of novels or may study the views of various philosophies.

All of these pursuits can be done on different levels. The college type advanced person may be reading very detailed topic books in his areas, whereas the student who has difficulty in school may be doing most of his work through oral-aural-visual sessions with teachers and students in small groups or independently. One student can be studying an historical approach by reading a typical junior high history book related to war; another student may be reading the same type of content but in a college text.

For their lab sessions some students may be attempting to paint a picture of war as they perceive how war affects a country. Another student may be writing a piece of music to define his emotions or feelings toward war and its effect on individual nations. A third student may be writing a play or writing poetry or visiting welfare agencies to discuss family separations which occurred as a result of some phase of the war.

In other words, by having students follow a common thread, the program can be tailored to individual needs, interests, and abilities as related to the general broad topic. One question, of course, that should be answered before the students ever study the effect of war is whether it is an appropriate topic in the first place. Perhaps a student already has a good perspective of the problem via other study that he had done previously, or perhaps this student would have benefited more by being in shop, art, math, and science this quarter and have been better off dropping social studies at this moment in his development. In group-paced instruction there are always some students who would have been better placed in a different program.

Look at individualized reading in the elementary school. Assume that we have traditional first, second, third, and fourth graders in the same pod. Five students might be working out of programmed readers but all on different levels geared to their pattern needs. Another five might be working from skills kits, the materials again at different levels. Ten may be working on basal reader materials, but these readers may traditionally range all the way from kindergarten to sixth grade. Another five might be working with library books in a recreation reading skill development program. The teacher may be working with one student at that moment while the others all work in their individual materials. Individualized vocabulary and spelling programs can be included in this general individualized language approach. Students can still work in small groups when it is determined that four or five may need specifically the same skill at a given moment. These do not necessarily have to be all "second graders"; there may be some traditionally labeled second, third, or fourth year students who all need the same help. They can meet in small groups to discuss topics that have arisen through their recreational reading.

By using programs such as the literature materials read by the instructor, all of the students, regardless of their level of ability, can listen to the same story read to the entire group, discuss the ideas in the story, and write individualized thoughts through their writing lab experiences. When students can select their own materials, when they are not divided into three ability groups, when they can read at their own pace, when skills are learned as needed, when individual reading conferences are held between the child and the teacher, when records of progress are kept between child and teacher working together, when there is extensive use of the resource center, when there is continuous evaluation, and when there is emphasis on personal progress rather than group comparisons, individualized reading becomes a tremendous asset to the school. Children's attitudes toward reading improve, the quantity of reading increases, the children prize the individual contact with their teachers, there are less discipline problems, and general reading achievement is usually higher than that accomplished in a traditional program. All of these are possible if teachers will stop insisting on meeting all of the kids each day in small groups.

A third area of individualization can be shown in the foreign language program. At a given moment in time when students are found in the language center, a few may be listening to individual tapes at various levels, others may be listening to records which reflect different levels of skill development or making tapes, while still others may be having an interview with the teacher in the language being studied. Advanced students may be working with beginning students in a small group tutoring situation. Other advanced students may be discussing a topic among themselves in the foreign language, some may be reading materials, some writing, some looking at filmstrips, and some reviewing vocabulary. In other words, every student can have a different activity going on at a given moment and can be brought together in small groups for discussion or skills instruction when it seems appropriate to do so. Obviously activities are limited for the first weeks for beginning students who must learn to speak and comprehend the language before they can branch out; but having advanced students more on an individual, self-paced program gives the teachers a chance to work more with small groups of beginners to allow them to comprehend some of the language and quickly move at their own pace.

Math is one of the easiest subjects to individualize. As a starting point a teacher can take one book and spread the children out in different chapters in that particular book. As students begin to grow out of the book and other materials become available, students can be involved with different programs at different levels. Students keep their own folders, take their own tests, and mark the number correct. These tests are in a file cabinet and available to all the students any time. Every so often they take a check evaluation--a type of test prepared by the instructor and kept by him so that he knows when the students pass that particular point in the material that they know, at least at the moment, the topics they have studied over the last three or four weeks.

Very few small groups are needed in math except on some skill areas where students can be brought together for common needs. Sometimes a small group discussion is of value to explain the role of math in a particular area; occasionally, large group interest or lab group skill presentations can be made. One or a few students listening to a teacher or a tape is actually a large group. Under this plan in math, students in grades six, seven, and eight, for example, could all be together in a large room working at their own pace. We know that students are spread over a ten-year period at most grade levels. In other words, typical seventh graders are spread in achievement from grade three to grade thirteen; therefore, it is impossible to have a seventh grade math book, a seventh grade program, and give all kids the same instruction at the same time. Most students can work through these materials at their own pace and seek help from a teacher or another student, because in this plan teachers and students are available for assistance. The teacher is not involved in teaching large groups of students each day, and students are not required to sit 55 minutes in a class and listen to the teacher or do the group-paced assignment.

In the area of home economics three girls might be cooking different types of foods, four girls might be sewing, three girls might be working on interior decorating, four on home design, two discussing their next project, three discussing child growth and development, four discussing some phase of marriage or divorce, and two might be in an infant care unit. Another girl may be knitting, one reading a home economics textbook, one writing her own UNIPAC, one developing ideas for a demonstration program, four listening to tapes, one watching a filmstrip and one a single concept loop film, two watching a regular film, one ironing, one washing dishes, and one conferring with the teacher. All of these activities can go on together in an individualized open lab approach. Teachers can pool the students together for some large group common thread. For example, in the area of social psychology or child growth and development, group discussions are quite appropriate; but most of the work in home economics should be tied to a self-directed individual approach.

In English students 9 through 12 might study the definition of beauty. In the large group presentation they might see a view of a lake which most all would agree was beautiful. On that lake might then appear a boat with a father and three children, and mother might be standing on the shore. Suddenly, mother sees the boat capsize, and father and the three children drown. The students are then asked if this scene is beautiful; does this lake now define the meaning of beauty for this individual? In small groups they can discuss the topic of what is beauty and what is meaning. In their independent study they can read at different levels in poetry, short stories, novels, and other searching for materials that they might classify as beautiful. In the lab situations they can write poems or short stories or plays at different levels of ability and related to the concept of beauty. Again, this structure relates to the required course approach; when self-selection occurs, the above still might be useful to small numbers of students but not to an entire class.

A course titled Theater Arts could be built around a combination of music, drama, art, industrial arts, and home economics. Students taking this course with a common thread theme could work on a variety of individual materials. One might be writing some music for the production, one helping to select published music that the students desire to use, some writing the actual play, some designing the sets, and others building the sets. Another student may be involved at that moment in memorizing lines for individual rehearsal, another might be working on stage details which are part of the production, two others might be listening to a record that is related to the production, and another might be making a tape.

These are not detailed illustrations of individualized instruction, but only suggested guides which teachers can consider. In summary, there are three points which should be made. In individualized instruction and personalized programming, it is quite practical and possible that only one student may be taking one particular course out of the entire student body. This student then would not necessarily be involved in much interaction, except for the possibility of interaction with a tutor or being brought together with others who had studied a similar topic or area either previously or at the same time. In other words, we do not always need a common theme. Students can work on materials that are of value only to them as an individual.

Others may be working on completely different materials such as in the reading program, but they can be brought together when they have a common need or common interest or by using common materials. These are not permanent groups and are not necessarily planned far ahead, but instead, are a joining of individuals when there is a need.

A third way of developing these programs is through the common thread approach. The students involved in the common thread program can easily be brought together for interaction, but at the same time, except for relating to a broad general theme, can be pretty much individualized in their approach to the program.

Obviously, in order to individualize instruction, we need a different approach toward scheduling and grouping, and an attitude which reflects the notion that teachers do not have to meet with all students every day. Further, in addition to teachers being trained differently, we need different materials to individualize instruction. We need to write UNIPACS, capsules, contracts, and other individual materials. Commercial companies must help by preparing materials. We need multiple textbooks instead of a single textbook. We are going to use more paperbacks and more programmed instruction items. We must take the materials we now have, such as workbooks, and tear them up and use individual parts of these programs. We must take the group-paced project materials such as the science programs are now, and reorganize them to be taught individually. We are going to need more than reading materials, and we need assistance in the selection of materials. We need filmstrips, single concept loop films, and commercial tapes. We need to make tapes, and we need to beef up the libraries. We need to get kids out of the building into individual projects, such as working in community opportunities. We need to let kids write their own lesson plans, choose many of their own subjects, and offer a broad selection of activities. Individualizing instruction is not impossible. The only thing that is holding us up now is the lack of trained teachers and the lack of individualized materials.

Some have asked how we are going to diagnose the needs of each individual. Most of the diagnosis is going to have to be done with approaches we already have. For example, we are going to have subjective teacher evaluations completed on an individual basis. We are going to have subjective team evaluations where several teachers work together, for in describing individualized instruction, it was assumed that in most cases where the size of staff permitted, teachers were working in team arrangements to develop programs. We are going to use homemade teacher tests, standardized individual achievement tests, standardized diagnostic tests which may be available, and evaluation by resource persons such as sociologists and psychologists. We are going to complete case studies for individuals and use social inventories and problem check list sheets; we are going to examine their previous school records, including anecdotal statements. We are going to involve the students in individual conferences for analysis of interests, needs, and abilities. We are also going to develop a new subjective scale for rating student growth in acceptance of responsibility and ability to make decisions, and we are going to have more student-parent conferences.

Once the diagnosis is accomplished the teacher or teachers in the team are going to prescribe to the best of their ability a program for the individual, based upon the results of the diagnosis. Does Mary need more foreign language? Does Jerry need to learn to analyze concepts? Does Jimmy need stacato type teachers? Should Henry use basal or programmed readers or both? In other words, on the basis of the identification of needs, interests, and abilities for that individual, we are going to prescribe a program that seems to make sense for that individual. The students should be consulted and involved in understanding this prescription. We are going to need to prepare for each child, individual objectives, performance criteria, and a fairly specific prescription of expected accomplishment at the end of the week, quarter, year, or course.

We are going to meet as a team to discuss each child and form a group prescription to lessen the chance for error, especially in the more difficult cases. In the first months in this program of team analysis, teachers say they do not know the children as well as they did when they had them in their own self-contained room; but after these first few months, the teacher begins to realize that by the information gained in discussions, he knows the individual better than he ever had before. In the team meetings the teachers must talk about individual students and about learning experiences for these students. Again, this is not all theoretical; it is being done in some schools. In programs like Wilson's, the students do much of the prescribing, as courses and attendance are both optional.

Teachers need to have a pharmacy ready so that there is a number of solutions or alternatives to learning. In other words, if we can just take a look at this whole problem the same way that the M.D. does a patient, it is not too difficult to work out a plan. The doctor diagnoses the individual patient as well as he can; on the basis of this diagnosis, he prescribes a program. He re-evaluates his prescription after a peiood of time and finds that if sulfa is not working, he switches to penicillin; if penicillin is not working, he may switch to aureomycin. If none of these work, he will do another diagnosis or call for a team diagnosis because the problem may be more difficult than he first surmised. It is true the doctor does not have 150 patients each day, but he may have 150 patients which he sees over a period of time. Part of the theory for survival is not to see each of these patients each day; this is part of the needed change in the schools--to accept the notion that students do not have to come in contact with every teacher every day.

In the above paragraphs we have tried to point out that individualizing instruction is an exciting potential for schools, that it is practical, that many schools are starting to do it now, and that within the next few years all good schools will have students with personalized curricula. Within this curricula, learning will be individualized on a continuous progress, self-paced approach. The decision that must be made now is whether or not the school staff is going to commit themselves to improving the instruction that is now taking place in the group prescribed programs which occupy about 90% of the teaching at the present time in the schools of America.

Suggestion number Five in the planning process was that of overcoming the barriers, and suggestion Six was that of providing models. In this discussion these two are combined to illustrate how the concept of student freedom and responsibility and daily scheduling have been barriers in many schools, in that faculty and administration or board would not approve the program based on the fear students could not accept the program and would not "learn as much." Schools which have been successful in this type of an arrangement have provided a model to see. They have shown that it does work, that it is an exciting philosophy, and that it is the kind of program we ought to have in most of the schools. The fear of turning students loose, and the mechanics and time necessary to build daily schedules have certainly been barriers in improvement. How does a school overcome such barriers? What kinds of models are there for staff consideration?

In overcoming barriers both the students and staff must understand the "whys, whats, wheres, and hows." Not knowing about the change from A to Z causes resistance. Teachers and students must understand the why factors, such as why we build a daily variable master schedule. They must understand that the philosophy of daily scheduling calls for time arrangements based upon the instructional task as determined daily by teams of teachers interacting or by student requests. They must know that schedules are attempted to provide for the abilities, needs, and interests of each of the students on an individual basis each day. Further, they must realize that the schedule and the concept of freedom and responsibility are trying to make appropriate utilization of school time, space available, professional staff, and materials. They also must know that they should make requests and selections regarding the daily programs.

The what factor becomes involved in two phases: one we could define as teacher scheduled time, and the other as student scheduled time. Most schools have been afraid to attempt unstructured schedules, but those who gambled have provided excellent models. The teacher scheduled time should occupy at most 20 per cent of the day and will probably be less in the future. In optional attendance schools now it is completely by student choice, not teacher demand. Even in required attendance situations, though, the teacher can demand small groups or large groups, laboratory sessions, or individual conferences. She may control time to the point that in her continuous progress, self-paced, individualized instruction arrangement, when there is a need to work with an individual, she may ask for that individual. When she needs a laboratory experience for him, she can arrange it or she can call for him in a small or large group.

The major portion of the day could be defined as student scheduled; at least 80 to 100 per cent of the day the student should be allowed to determine what he needs to do with his time. He should not be controlled by the authority of the teacher all day long, except in necessary cases.

What can the student do during the time he can structure? He can become involved in quest study, pursuing something on his own that he has developed; he can be involved in depth study, providing more detail in work growing out of a program partially prescribed by the teacher.

He can be doing some individual study which might be the equivalent of the assignments that we have given him in the past. He may be involved in some type of other independent study project relating to one of his classes or relating to his own special task. For example, he might be the only one in school taking Latin American History and may be working during this time independently on this course. The student may be working with a small group; he can either organize it with other students without a teacher, or he can request a small group with the teacher. In other words, the student may request meetings with teachers, either as an individual or in a small group, or even in a large group. If students feel a need for some particular help from the teacher, they can receive it, generally on the day it is needed. On the other hand, they might be involved during the time they have in some kind of student activity; they may be relaxing, eating a doughnut, working on the school newspaper, or enjoying some other area that is not related specifically to a subject being studied.

Both students and teachers must understand where the students may go during this student scheduled time. These areas, for purposes of explanation, can be divided into two types: study areas or activity areas. In other words, some students may be involved in what adults call good learning situations, working on some kind of class or independent project. Others may be involved in something that may not be directly related to the prescribed classroom program, but something that the individual student feels is of some benefit. There should be from ten to twenty-five different choices available to students, depending upon maturity and facilities. These apply to first-year boys and girls as well as to seniors.

A student might choose as one of his twenty-five possible selections today to go to the library resource center to study; he might choose the student center--the so-called student union, or lounge, or doughnut shop, or whatever name it might have. He may choose to go to the reading laboratory where individualized reading is established, not on a remedial basis, but as part of an approach that calls for every student to improve his reading by participating in the program sometime during the school year. The student might be involved in another classroom session; he may decide to repeat a class that he had previously and would like further clarification. He might go to the industrial arts laboratory and work on a project there, or he might be in the cafeteria, or the counseling center where he visits with the counselor or reads descriptive college or vocational selections. He might have a conference with an individual teacher; he might be involved as a student assistant working in the office, library, or some other area; or the student might go to the art studio.

Ten areas already have been described; the eleventh could be an open typing laboratory. Every student should be able to type whenever he has a need. The student could go to the outdoor center, a place where students can lounge or relax or study outdoors, or to the home economics laboratory. He could work on a school project such as the newspaper or the yearbook or be working in the science laboratory independently; he could be in a committee meeting of some kind. A student needing structure could be assigned to a teacher or an area where quiet study is occurring. Another could choose to be in a listening facility such as the language laboratory, or he might choose the physical education lab.

He might go to an evaluation center where whenever he is ready in his individualized self-paced program, he can take the evaluation on the particular day and hour that he desires. He could be in the music studio. We could go on and on pointing out places where the student could choose to be during the time he builds his own schedule.

These are not theory, and they are not philosophy; there is room for these choices even in crowded buildings. It becomes very feasible when the students and teachers overcome the notion that they must meet in the teachers own room with twenty-five students every day. As soon as the teacher realizes she does not have "her room" and "her students," but instead is working as part of a total school approach, and when she works with individuals and not group-paced instruction, these activities and choices become very appropriate.

One of the reasons for unscheduled or responsibility time (RT in some schools) is to help students develop the concepts of leisure and responsibility. The future world is going to leave adults with large amounts of unscheduled time. We are basically going to select from three broad choices; we can involve ourselves in study, service, or recreation. Some of the free time ought to be spent studying; self-education and life-long learning are going to be much more important in the future world. A second avenue for use of unscheduled time is that of service; more and more we are going to offer services to volunteer understaffed state and private agencies. Part of the time will continue to be spent in recreational activities. In schools where choices are allowed most of the day, the students gather experiences in a controlled environment in making decisions and in wise use of time. They learn that with freedom goes responsibility.

This entire concept is so terribly important that it is of value to take time here to further explain and illustrate how this attitude towards students works. It is necessary that the innovative schools understand student freedom and responsibility; it works in suburban, urban, and rural schools but is implemented differently. In a problem area, schools might only give a small percentage of the students these opportunities in the beginning and let the list gradually grow. In an area less troubled with problem learners, all 100 per cent can be released, although about 20 per cent need to eventually be structured for a time before they gain complete understanding of the program.

Schools embarking upon innovative, exemplary programs must accept this basic concept--one which is greatly in need of correct implementation--that of allowing students opportunities for freedom and responsibility. If educators believe that a prime purpose of schools should be to develop decision-making, responsible, value judging, perceptive, self-directing, self-educating individuals, then time must be provided for students to have opportunities to develop these skills. This statement applies to both elementary and secondary schools, to "first grade" students and high school "seniors." The only difference is in the degree and the method of implementation.

There are two important reasons for the acceptance of the concept of freedom and responsibility. Foremost is the philosophical belief in necessary goals for education; second is the fact that if a school decides to implement a truly daily variable schedule, it is virtually impossible to program all students 100 per cent of the time. In past efforts to account for all students, the obsolete concept of a study hall has been employed in the secondary school and constant teacher-pupil contact in the elementary. Fortunately, educators are realizing that the study hall offers little value other than as a "jail" where attendance can be taken, thereby accounting for all students' actions almost every minute of the school day.

Students need to learn to use time as a tool. Being tightly scheduled for six periods a day at school with no optional choices does not lend itself to aiding students to make judgments about appropriate use of time. Schools of America have grown to be dependent upon organizational processes that are more nearly intent upon managing students than educating them.

Most schools now are run on a 90-10 basis--90 per cent of the decisions being made by teachers, and 10 per cent by students. What is needed is a more nearly equal relationship. This is not to imply that schools be managed by young people; it does, however, intend to suggest the need for joint teacher-pupil considerations of school programs.

Under the old secondary school concept of study hall, or assigning students to six classes, or in the elementary school of allowing children only a short recess, the only times students could make choices independent of the teacher were at lunch; these were limited to a few areas for short periods of time. Students have wants and needs as do adults. They ought to be able to decide during part of the school day what they would like to do--what would be most meaningful to them at a given time. The administrator or teacher cannot during the summer or on a day-by-day basis, decide what is best for every student every hour of every day. Students need to be "turned loose" part of each day.

How is this idea implemented? In the elementary school most students should have a chance each day to make decisions. Smorgasbord scheduling makes almost the entire day a choice; however, in more conventional schools there should at least be an opportunity available for them to decide whether this time should be spent in the library resource center, on the playground, in the cafeteria having a snack or talking to friends, in the art or science centers, or in the teaching pod working on special interest projects. First-year students, in general, may have less time than sixth-year students, although at all levels individuals may have more or less time depending upon their ability to accept responsibility; some may make decisions a greater part of the school day. Schools which have done this have discovered, much to the amazement of the skeptics, that students can make wise choices and can be away from a teacher and still learn to read, write, compute, think, analyze, observe, draw, sing, and jump. The "crowded" elementary school curriculum takes on a new dimension with the decision-making element added. First-year students can self-select all day long.

At the secondary level, at least twenty-five areas, as mentioned, need to be identified as options for selection. Depending upon the development of the daily schedule or smorgasbord, they may have one, two, or six hours of student scheduled (unscheduled or responsibility) time.

Many students should have a choice of attendance in most classes. In fact, forward-looking schools accept the concept of optional attendance for most all students. Schools that have experimented with this have found that students will attend classes where teachers have developed programs that are meaningful and realistic for the goals of the learner. Students shy away from classes oriented primarily to teacher goals.

For student-selected options, remember that a patio, a snack bar, the cafeteria, the library resource center, the art and music rooms, the shops, home economics areas, science laboratories, physical education areas, typing, reading and writing laboratories, the counseling and testing center, an appointment with a teacher, repeating a class for further clarification, school activities (newspaper), and a quiet study room should all be available. In these choices there must be a mixture of quiet areas such as individual carrels in the resource center, semi-quiet areas such as the cafeteria where students may work together in small groups, and noise areas such as a patio and snack bar where students may talk in normal or loud tones.

There are some built-in brakes in such a program. The students are taught that there are only twenty-five areas, not twenty-six or twenty-seven. They receive further explanation that with freedom goes responsibility; in a society there are necessary restrictions. An analogy may be made with driving a car, which one may freely do as long as speed limits, traffic lights, and road courtesies are observed. When traffic signals are violated, perhaps nothing happens the first time. Maybe the second time a ticket is received, but tragic results might occur the third time by running down a pedestrian or hitting another car. Students must understand that in most schools climbing on the roof and hitting the teachers are not among the possible choices. Open campuses are advocated in flexible schools, but in some situations a closed campus may be better.

Students generally fall in four broad categories as regards functioning in this type of program: (1) the majority of students handle the entire program beautifully, (2) some handle it well but need an occasional prodding, (3) several handle parts of it but need to be structured into some classes for part of the day, (4) there are a few who generally need structuring all day long; at this stage of their maturity they are not able to handle much unscheduled time. By the end of two years in this program, most students fall into category 1 or 2--about 98 per cent in a rural or suburban type school and about 60 per cent in the inner city.

Students who fall in category 4 can usually be subdivided into two types: (1) those who are fine citizens but who for one reason or another at present need a highly structured program; (2) those who are poor citizens who abuse the opportunity of freedom. For the former, assignment to a type of structured schedule developed each morning by the student in conjunction with his teacher-counselor usually will suffice, while the student gradually learns to make decisions. For the students who abuse the opportunity of freedom, a tighter structure must be provided. These students have usually lost communication with adults and need to be helped back into communication; the best way is by assignment to an adult they can relate to. A program is necessary to guide them to be able to accept responsibility. A planned method whereby one time they receive the "pep talk" from an administrator, one time a small group or individual discussion with a counselor or teacher, one time a session in study skills taught by a teacher, and sometimes just supervision from an aide will help most; sensitivity training has helped some. Assigning individuals to a teacher or aide often helps them most. A few students may need special aid from school psychologists or other specialists and may spend the majority of their time in a structured program. Identification of deviant behavior and review of cases must become a part of the evaluation so that students who demonstrate a new readiness to accept responsibility can be given unscheduled time again.

There must be a follow-up evaluation after the treatment; individual conferences with an adult that the student can relate to, along with truly personalized programs, have proven to be among the best remedies. If students are in classes they select because they have interest and ability in those subjects, and are with a teacher they can respect and communicate with, most of those who are possible to save will eventually change, though it may take two or three years for some. Usually, these students have problems in the affective and psychomotor domains which need to be clarified before the cognitive can be improved.

A specific example out of many is selected here to illustrate this message. One summer the math teachers in a school spent hours and hours going over new math programs, new textbooks, and making decisions as to the type of innovative, exciting math program needed for seventh and eighth graders. The staff chose several different programs, realizing that no one program was suited for all the students. School began, and the students undertook this wonderful math program, diligently planned by teachers with availability of all new materials.

Report cards had not yet been abolished in that school; at the end of the first nine weeks, in surveying the grades given to students, a number had received D's and F's in math. Realizing that it must be the students' fault because over the summer the staff had just overhauled the math program so that it would satisfy all the students, the individuals receiving these grades were brought together in a group and given an old-fashioned lecture on "get busy and do your work; it is your fault that you are failing math."

The second nine weeks went along, and some of these students began to appear in the office as discipline problems. At the end of the second nine-week period it was the same story again. Generally the same students had received D's and F's. They were again admonished by the administration. In the middle of the third nine-week period, two of the boys in the traditional eighth grade were kicked out of math class. They were told they could not return. They were finished, and all other kinds of threats were given; then the math teacher marched them to the office. They were again chewed out by the administration; the kids threatened to quit school and said they could hardly wait until the end of the eighth grade when they could legally quit in that state; they only had about three months to go. What was the administrator to do? He could not spank them or expel them because they wanted to have that happen. The staff had planned this wonderful math program, but the kids were still failing and having disciplinary problems. The students had been worked with all year in terms of counseling; their parents had been in for conferences; finally, in exasperation, the adult working with them stated, "Don't you need any math?" The response of the kids opened a whole new world; they said "Yes, but not the kind of math we are getting." The administrator about fell out of his seat; the kids were willing to study math, so he decided to listen to them.

At that point a discussion ensued with the two boys about what type of math they needed, and a plan was worked out whereby the students could spend the next six weeks developing a horse farm on paper. They were at first resistant to this because what did a horse farm have to do with math. When they were asked if the farm would have a work-out track, the reply was yes. They were asked what would be the circumference and diameter of the track, how many board feet of lumber would be needed, what was the current price of lumber per board foot; finally, how much would this track cost? Next they were asked if it would have a corral. The answer was again yes. "How many square feet of lumber will you need, what is the price per board foot, and what will the total cost be?" They were asked if the farm would have a bunk house, and again the answer was yes.

As the project finally emerged, these students were given six weeks to complete a mural of a horse farm. They had to go to the art teacher for help in terms of painting this mural; they had to go to the drafting teacher to learn how to scale the drawing; and they had to go to the math teacher who had kicked them out of class for help in figuring the price of the project and all math needed, such as circumference and square feet. During the six-week period these two boys became excited about their project. The teachers, working as a team, began discussing what three teachers could do to help those who have problems; at the end of the six weeks the boys had completed a beautiful piece of work. There had been team teaching and interrelated curricula through the cooperation of the art, drafting, and math teachers. The boys then were asked what they wanted to do next because they had completed their math requirements.

One of the conditions of this project had been that if they completed it, they would be given a C in math and passed and would not have to complete the course in terms of traditional math hours. Their answer was, "We want more math." When they were asked, "I thought you did not like math!" they answered, "We like math, at least we like this kind of math." Other students in the school saw this project going on and suddenly desired to do this type of work themselves.

What developed from this small start was that many students developed individual math programs, many of whom were the traditional 90 I.Q. drop-out type of students. Math became fun because it became meaningful to them. They went on to learn a great deal of math and in the process inspired the teachers to develop a completely non-graded, individualized, stimulating math program for the entire school.

One of the outgrowths of the project was to understand that when teachers listen to kids and develop relevant programs based on their needs rather than requirements and programs determined entirely by educators, their whole attitude toward learning changes. These two boys went ahead and graduated from high school, probably something that would not have happened had they been required to sit in the traditional group-paced program where year after year they followed the conventional requirements found in most junior and senior high schools.

A number of schools have tried to implement the ideas presented above, but they have failed. Usually the error has been a lack of communication and understanding. Some schools have simply announced this policy in September, talked about it a short time in an assembly, or sent out a few bulletins during homeroom, and then expected teachers and pupils to adjust overnight after years of a structured indoctrination. A carefully planned explanation must be devised to insure success.

The first step is that of individual talks with key faculty members to be sure they understand the philosophy. Then a large group presentation is made to the whole faculty as to why and how, followed by small group sessions with parts of the faculty, and individual conferences where necessary; various communication efforts must be utilized to insure that teachers comprehend student-scheduled time. For the students, sessions with student leaders are a beginning. Then large group presentations are needed; there the three "W's" are spelled out: Why do you have student-scheduled time; where may you go; and what do you do when you get there? Some basic operational policies are established. The three "W's" are the single most important phase of the planning. Students must understand them completely: Why do I have unscheduled time; where may I go; and what do I do when I get there.

Following the large group, teachers should take time to discuss the matter in small group seminars. The few reasons for putting some students on structured time should again be stressed. Then constant work in the early stages with individual students is needed. These sessions should be of a counseling nature, not punitive. Students must be helped to realize that the correction, even when critical, is not condemnation. By the second year, or at least by the end of it, the need for structured programs should be overcome in most schools.

Further, as mentioned above, the four faculty-student teams ought to be formed. These are in the areas of curriculum, new ideas, communication, and evaluation. They should meet often to discuss ways to improve the school programs. They help to get the student body involved in the mutual relationship that should exist in a school. The communication group can explain the program to their peers. The evaluation team can develop and administer student surveys to see where better understandings and improvements are needed. The idea people can suggest changes. The curriculum group can relate the new concept to teachers and students in terms of classroom assignments. These groups should definitely represent a true cross-section of the student body. Involving students deeply is the key to success of the program.

After all this, it is still possible that some parents may object. If they come to complain saying that they do not want their children to have student-scheduled time (do not call it "free time," or "choice time"), explain that it is a joint enterprise and that the teachers are standing by to consult and to guide. Ask them if Mom has a coffee break during the housework, and if Dad visits the canteen truck at the plant or office. Explain that teachers have a chance to make decisions about their use of time during part of the day, including the option of eating a doughnut. Some students have a need for relaxing after a difficult test, or for a snack if they missed breakfast, or for studying for a future evaluation. Students should have opportunities to decide what is best for them at a given time.

Note to the parents that on Saturdays and Sundays their children are often without supervision and often choose to have a snack. After all this, if parents still object, acknowledge that Pete or Jane can be assigned to a structured schedule if the parents really feel their children cannot be trusted yet to make wise decisions. Encourage the parents to consider the child's sense of values; for example, given an opportunity to choose between a nickel and a paper dollar, the young child may select the nickel because it has a place in his "experience bank." He has held one before, and he probably knows that it can be traded for a treat. Thus, given the opportunity to be master of one's time, as a college freshman for example, he may well make a series of disastrous decisions, for he has not had the opportunity to make decisions about uses of smaller increments of time in his previous learning experiences. Most schools are organized as if it is expected that the learner is suddenly and magically endowed, about the time of commencement from high school, with good judgment about using time. The learner must have concrete experiences to be able to learn.

It is true that some students will make poor choices. Sometimes they will choose a doughnut when a book would be a better selection. Adults do the same. If students are ever to learn to make judgments, they must have the chance, and what better place than in the controlled environment of the schools. Boys and girls can gradually be given, from first year to twelfth, increasing amounts of freedom, responsibility, and decision-making situations.

Schools which have successfully implemented this philosophy have parents who say, "I do not understand it. I do not send my child to school to sit on the grass and eat doughnuts, but I like it; I have never seen Johnny so excited about school." Objective evidence being gathered in schools across the nation is beginning to bear out the subjective evaluations. The great majority of students and teachers who have operated under the old system of rigidity and then under a successful program of flexibility, given a choice, would never return to the conventional. One of the truly exciting and meaningful innovations in schools today is the entire concept of increased variability in scheduling and the dynamic philosophy of giving boys and girls the opportunity for freedom and responsibility.

Part of this barrier and model we have been discussing calls for a solution to one problem--those students who may not be completely ready at the present time to handle most of their time as unscheduled. In other words, in addition to any structured class time requested by the teacher, they may need an additional ten, twenty, or thirty per cent or all of their time structured. The most difficult cases may need some type of 100 per cent structuring, but the student should not be left structured indefinitely or without any help. The counselors should plan to work individually with these students part of the time. A sympathetic teacher can help arrange a program for students who are having difficulty. In schools where students choose their own teacher-counselor, this person is often the one who can most help the individual student.

The question of structuring some students raises the entire spectrum of the cognitive, affective, and psychomotor domains. It is quite evident that many of the problem students today have basic needs in the area of the affective or psychomotor domains, more than the cognitive, at this moment in the individual's development. Yet, schools constantly say Johnny is a tenth grader and must take tenth grade English. Johnny has just failed generally and has received D's and F's in English for nine years; he hates the subject and usually grows to dislike the teacher. Still we force him into it. Some students are much better off in the entire area of personal development, responsibility, decision making, and general attitude toward school if they are taking perhaps two hours of art, two hours of individualized reading, and an hour of physical education during the day, instead of one hour of history, one hour of English, one of math, science, and physical education. The entire structure has to be revised for these boys and girls. If we really believe in personalizing programs, we try to plan a curriculum which fits the child. Through self-directed, partially-directed, and consultant-directed courses, students are really able to pursue studies which make the old cliches become truisms--a curriculum actually geared to needs, interests, and abilities of the individuals, not the entire tenth grade as a group.

Students should be allowed to window shop as part of this philosophy; there is no need to force registration before school starts. They can indicate what they think they are going to take to help schools plan staff, space, and materials. As school starts, the students go to classes they thought they wanted. If they are satisfied, they stay there; if not, they try others. After five weeks or so of window shopping, students fill in class enrollment cards. This eliminates the need for drop-add problems. Students can drop or add at any time after this but go through a small amount of paper work so that the school has a record of the learning efforts of each student. This then helps diagnosis, prescription, and the identification of individual objectives. There is no reason to ask a student to decide by the third week of school his fate for the semester or year. If instruction is individualized, students can start or stop classes when it seems to be appropriate. Control is possible by requiring teacher and counselor signatures.

We can do it, we must do it--the time has come for educators to get off their duffers and start treating kids with respect, faith, and trust --as individuals--and not lock them into rigid compartmentalized schools. There is no place in schools for study halls, hall passes, required tenth grade English, and locked in elementary rooms.

THERE HAS BEEN A BASIC THEME RUNNING THROUGH THIS BOOK AND THAT IS THAT CHANGE IS EASY; THERE ARE FOUR INGREDIENTS: COMMITMENT, PHILOSOPHY, HARD WORK, AND CREATIVITY. Principals ask, "What do you do without study halls?" The answer is to use the above four ingredients. Develop a recipe for each school--if schools really believe we should not have kids locked up, then change the system. For those who want a step-by-step method, hopefully, another book will provide it. In the meantime, the simple recipe for no study halls is student responsibility--they have the 25 areas mentioned above, and they can choose where they want to spend their time.

Suggestions seven and eight in Chapter 4, regarding planning for the creation of new programs, call for considering the budget and selecting an alternative. In this particular discussion, these two steps are combined. The purpose is to not only illustrate scheduling, but to show that these suggestions are practical steps for a school to take in implementing each of its desired revisions. There are about seven ways to build some type of "flexible schedule" at the present time. These seven are briefly outlined here, followed by some specific ideas for their implementation.

One of the seven or more ways to build a schedule at the present time is to use a computer program based on modifications of the original GASP system--better known now as flexible modular scheduling. Groups such as the McDonnell Automation Center, the agencies which have taken over the Stanford system, Indi-flex, and General Electric are examples of companies which can build such a schedule. Here requests are put into the computer and basically five master schedules are derived for the year. This is one way to build a type of flexible schedule.

A second way to build a flexible schedule is with the use of keysort cards, particularly those developed as the Royal-McBee Company Keysort System. Generally a scheduling coordinator and scheduling clerk are needed for this type of mechanism; students' schedules are placed on keysort cards. The schedule can be built daily, weekly, or on a semester basis.

A third way to schedule is with a schedule board, some type of identification tags, and a clerk. Teachers turn in their requests to the clerk who builds the schedule on the basis of these plans. In other words, a schedule request sheet job order is turned in each day on which the teachers tell the clerk the amount of time that they desire for that particular day for the group that they want. They may also turn in any special requests they may have such as the room arrangement, audio-visual materials, and other. The clerk then takes all of the requests from the teachers and builds a schedule.

A fourth way to build a schedule is to form scheduling teams. These scheduling teams may organize a number of ways, but it usually involves a large block of time during the day. They can be arranged on an interdisciplinary team approach, or a disciplinary team approach. They can be on a grade level or non-grade level arrangement, but the general plan here is that a number of teachers with their aides are given a number of students and a large block of time; within this block they build some type of schedule.

A fifth way is getting involved with the newer technological developments. There are presently new techniques in the keysort approach mentioned previously, but the technological approach that is leading the way presently is the one developed at Brigham Young University. Their laboratory school was the first in the United States to have a daily teacher controlled flexible schedule built with a computer. It was an offshoot of the original Brookhurst and Canyon del Oro daily scheduling plans. Unfortunately, for financial reasons, the Brigham Young University laboratory school was forced to close. The program is still available and is the method which holds, at this writing, most promise for the future for those schools desiring the best possible forward looking scheduling system. It can be used for daily demand or daily smorgasbord approaches.

A sixth method is a combination of methods mentioned in the previous five. In other words, one school may have part of its schedule built daily by the computer, another part through the block of time arrangement where teachers build it themselves by hand, and a third part of their school schedule built in a more rigid fashion by the Stanford-type computer arrangement or an offshoot of the old bus schedule built by hand to accommodate those teachers who still insist on rigid constant arrangements. There are thus all kinds of possibilities in building creative schedules.

The seventh type is the best; it is called daily smorgasbord scheduling, built daily by hand or by the computer. A brief description of this type of scheduling is presented here with a few suggestions as to how to work into it in gradual stages over the year. First, look at the process of beginning to build a daily variable schedule and then later at the smorgasbord. Teachers first need to understand why this type of time arrangement is justified as better than the traditional schedule. Once they understand, then it is just a matter of working out the mechanical phase of the implementation. Each day teachers should turn in request sheets for the students or classes they desire the following day, or for the offerings they will place on the smorgasbord. For example, the teachers turn in on Tuesday their requests for Wednesday's program. The request sheet, in addition to the teacher's name and date, has the following information: the class or students or offering desired, the amount of time desired, the kind of room needed, and any special remarks such as need for tape recorders and overhead projectors or an outside resource speaker so it is essential to have this class at this time. The scheduling team (a clerk and three of four teachers who serve on a rotating basis) take these request sheets and begin to fill in the work sheet. The time blocks are listed down the side and the teachers' names are listed across the top. The information from the request sheets is transferred to the work sheet. It is true that some students are wanted by several teachers sometimes, but the team has all day to try to work out a schedule that resolves any conflicts. Once the schedule is completed in work sheet form, it is then transferred to a master ditto, and copies of the sheet are run off and distributed to each teacher and to several bulletin boards around the school. The schedule for Wednesday is posted by 2 o'clock Tuesday afternoon.

In this type of scheduling teachers may request on a daily basis large groups, small groups, open labs, individual conferences, or whatever. They can request fifteen minutes of time or two hours of time. They must determine how they can best teach the class. By the same token, students can turn in requests for the kinds of help or classes they feel they need. The decisions about the schedule are worked out during the scheduling session. Because the schedule is built daily, the teachers who are working on that schedule can be freed for that hour or as long as it takes to compile it.

One of the secrets in making this work is to have very few "must" classes. In other words, teachers should not request students five days a week. There should be very few large group classes. A guideline is that one class or one large group a week is enough in most subjects and too many in the majority of classes. This does not mean that students are not expected to see the teacher more often; but when a teacher determines there is need for a specific group on a specific day, she should be able to request it. Generally the teacher requests open labs which cause no conflict in the schedule, or individual conferences which again cause no conflicts. The teacher may also leave students open for independent study, or request small groups, most of which cause no conflict. The few times teachers need to request homogeneous small groups, they normally can be easily scheduled. Generally no class larger than five or six students should meet except for the seldom-requested large group. Part of the key to this type of scheduling is to request classes of five to fifteen as a maximum, and all with optional attendance; "must" classes must go.

From this framework of daily variable scheduling as a starter can come a much more exciting and forward looking program, which for lack of a better name, we call daily smorgasbord scheduling. The smorgasbord is basically just that--the kids are offered ham, pork, turkey, chicken, several kinds of salads, several kinds of potatoes, rolls, and desserts. In terms of educational subjects, what happens is that the few large group requests are scheduled throughout the day. The rest of the time the teachers merely indicate what is available to the students at that particular hour. For example, under one teacher's name may be listed an open lab, then individual conferences, then open lab again, and then a small group discussion on national matters with some closed time in between. Each teacher has similar kinds of offerings throughout the day. There is no conflict because the students come and go to these areas as they desire on an optional basis.

This type of scheduling is not philosophical or theoretical; it is a practical successful way of developing programs for students. Once the instruction is individualized and personalized, and once the students have learned to operate under the concept of freedom and responsibility and open classes and open campuses, the schedule is an exciting tool. It enables students to choose each day the kinds of activities that make sense to them. On a given day a student may spend all day in the art lab or industrial arts area or in the resource center, or the student may divide up the day and spend two hours in home economics, half an hour in English, an hour and a half in math, and other similar combinations. The key here is that the students select where they want to go and what they want to do. Even the large groups should be optional. This works on a K through 12 basis. The only difference is that there may be a little more structure offered in the lower years, and sometimes they may not have an open campus, especially if they are in heavy traffic areas. The pilot programs with daily smorgasbord scheduling have been tremendously exciting and hold great promise for the future. Several schools are now using this approach.

Remember, for the past several years educators have been involved in developing schools operating daily schedules. Wilson School, for example, operates a school of 600, Pre-K through 12 on a complete daily smorgasbord schedule; never do schedules repeat themselves. Each one, built by hand by a group of teachers, is designed to provide as nearly as possible for individual growth.

In changing to new scheduling and all the other innovations, the question of money arises. Yes, schools need more money, but the present problem is to use the money we have more creatively; to do this we must reallocate resources. In other words, in 1967, if a school spent $50,000 on textbooks, two teachers, blackboards, paint for the walls, maybe now they will spend the same $50,000 on a video viewer, one teacher, three aides, an overhead projector, and will knock out the walls. Schools can have a flexible schedule on their current budget. What they must understand is that the money that is spent by the school district must be reallocated and deployed differently than we have in the past. We are not talking about an impossible financial arrangement. Too many schools around the country have already proven this.

In considering, then, suggestions seven and eight as they relate to budget and to a choice between the seven alternatives to scheduling just described, presented here are a few of the possibilities if schools must start these kinds of schedules rather conservatively. For example, the block of time arrangement can be illustrated as follows: Perhaps six teachers, maybe two English, two social science, two science teachers, and three aides are given 210 students for a three-hour block of time--the equivalent of periods one, two, and three. The rest of the school can operate traditionally; the 210 students are completely free to organize a program as they desire. All 210 students may be working individually or some may be working in a large group with one teacher, or all of them may be working in small groups, or some may be working independently, or in laboratory situations, or in informal groups. But remember, whatever they are doing has been determined daily by these students and teachers who are responsible for their own time. The schedule on a given day may call for about an hour of the student's time scheduled with a teacher; the other two hours may leave provision for many students to determine the kinds of work they need to do. Their choices may be related to English, social science, or math. They may choose not to do any work in these particular subjects, but instead go to the student center for a doughnut, to the art room, or to the physical education building for a workout. In other words, these adults and these students have complete flexibility during this team arrangement to build the kind of program that they desire.

Another arrangement might be combinations of alternatives. For example, one team may have four hours, or sixteen modules, if the schedule is built on a fifteen minute module base; this gives them a big block of time similar to that just described. Right opposite them might be teachers who have back-to-back schedules for horizontal, but not vertical, flexibility. In other words, they may not have four hours and 100 students with four teachers, but there may be two or three teachers working for an hour, or 75 minutes, or for some other time arrangement. An example of this might be if three math teachers have a group of 90 students to work with for an hour. They can have horizontal flexibility working as a team and have large or small groups, independent study, and other flexible arrangements.

At the same time that some of the teachers are involved in this big four-hour block and others are involved in horizontal arrangements, a third group of teachers may be on a regular conventional schedule. However, to show them that there are other ways of teaching besides fifty-five minutes, or to provide longer and shorter periods of time for some subjects that may demand them, the so-called former first period for those on a conventional schedule may be sixty minutes one day, seventy-five minutes on two other days, and forty-five minutes on the two remaining days. In other words, the conventional schedule can be varied too.

At the elementary and middle or junior high levels, there is absolutely no excuse for not having a daily variable schedule. As soon as one eliminates departmentalization in junior high and self-contained rooms in the elementary school, there must be plans for some type of daily movement of students in order to retain the desired flexibility. The easiest way in the elementary school is to form teaching teams. These teams can operate within large blocks of time and can build daily schedules themselves. For example, four teachers and three aides may be given 125 students all day long; these teachers and their aides would teach all the subjects for these 125 students. In other plans the teachers may teach all or some of the subjects. For example, one teacher may teach eight subjects in the elementary school (not recommended, but possible) or she may only teach two or three of the subjects. There can be larger teams within which are then developed sub-teams. There may be eight or more teachers in the school; each one becomes a specialist; students are moved from teacher to teacher, not on a departmentalized junior high type basis but growing out of the team plans where a series of specialists work together to help individual students.

Ultimately we are coming to the day when in most of the larger schools computers will build the high school and middle school schedules on a daily basis. Smaller schools and most smaller elementary schools will probably continue to remain for awhile on some type of block of time, teacher constructed approach, which is a simpler type of arrangement for building flexible schedules in small schools and in poor districts where they have not formed intermediate districts to provide computer availability. The main point to be stressed is that daily flexible scheduling is just as easy as building a traditional schedule if one has a commitment to the philosophy and begins to non-grade and individualize. The coming of daily smorgasbord scheduling is already revamping the forward looking daily variable schedules.

In order to really change schedules, requirements must change. For example, in building a high school flexible schedule, as soon as the teachers consider their program a big open barn with very few demands for groups, it is easy to open up the flexible schedule. If the art teacher has primarily open labs and perhaps occasionally requires a group, if the typing and industrial arts teachers basically do the same, and if the social studies teacher demands no more than one large group every two weeks, and perhaps two small groups a week, the schedule is relatively free. The math teacher can work primarily on an independent basis and, therefore, have almost no demands for large groups of students. When this becomes the method of developing curriculum, teaching, and learning strategies, then the schedule becomes a relatively simple matter. Presently the reason for the Stanford type schedules is that we are so locked into group-paced instruction and are still so often seeking to meet the group of twenty-five, or to teach as if it were twenty-five, that we miss the entire possibility of exciting educational benefits.

In building daily schedules, whether variable or smorgasbord style, the student rarely, if ever, has the same schedule. He has 170, one for each day of the year. The teacher in this particular program may find herself teaching on Monday, and then on Thursday may find that she has the day off to dream. In other words, because of a flexible schedule schools can release at least 25 per cent of their faculty at any given time, some teachers are always scheduled out. Part of the reasoning for daily scheduling is to provide this kind of potential for the teacher.

Thus far the discussion in this chapter has tried to apply eight of the suggestions found in Chapter 4 to enable staffs to begin to understand how they can develop new programs; in this case it has been applied to daily scheduling, individualized instruction, and student freedom and responsibility. There could still be a chapter written on the very specifics of how to actually build the daily schedules. The best way to learn to schedule is to work on them. It takes most schools an entire quarter to train all the teachers, and even then they do not all understand it well. At Wilson the schedule for 600 is now built each day in less than an hour unless unusual problems arise.

Some educators, though, are still asking, "Where are we in this whole process of flexible scheduling?" Some have thought they should not adopt flexible scheduling because it did not do for them what they wanted it to do, but they are looking for a panacea, the Shangri-La. We are not at that level of development in flexible scheduling, individualizing instruction, and providing for student freedom and responsibility. We are not there in any of the 63 revisions that are summarized in the final chapter, but we have made attempts along the way the past ten years in each of the areas to try to implement these changes. For a poor analogy, perhaps it is possible to try to compare changes in schools at the present time, particularly in the area of variable scheduling, with the development of the airplane.

Schools have a choice of staying in the pre-airplane stage--they can be content with the horse and buggy and the old iron horse--or they can choose to try to fly. Some have not been content with the old iron horse; in terms of scheduling, they are attempting to be the Wright Brothers and are beginning to play with scheduling just as earlier pioneers did with the notion of an airplane that would fly. Those first airplanes were not very successful, and neither were the early attempts at flexible scheduling; but at least the attempt was made. The airplane moved into the World War I era, the Billy Mitchells and Eddie Rickenbackers and the developments that took place at that time. Next came the 1920's, with the Spirit of St. Louis and Lindbergh's pioneering trip across the Atlantic. Then remember in the early 40's came such propeller driven fighter planes as the P-38, and remember how excited we were in World War II to learn that the P-38 flew over 400 miles an hour. Right at the end of World War II we finally arrived at the early jet stage. In the 60's we developed the present jets; and now in the 70's, it looks like supersonic airliners, and maybe in the 90's it will be passenger rockets. We are even learning to parachute planes safely to the ground.

All educators working with variable scheduling are at the present apprehensively optimistic. The whole area of educational technology is at varying stages of development. We are generally at stages somewhere between the Wright Brothers and the rocket. Schools have a decision to make; do they stay on the old bus schedule, the pre-Wright Brothers method of scheduling, or do they jump into the airplane. Some of the scheduling techniques are further along than others. Probably the most advanced, about the P-38 stage, are the daily computer scheduling developed at Brigham Young University, and daily smorgasbord scheduling being developed at Wilson. The daily variable schedules as developed at Canyon del Oro and Brookhurst, and the block of time scheduling are that of the Spirit of St. Louis stage. The Stanford type scheduling system may be back at the Billy Mitchell World War I age. Some of the other promising efforts are still at the Wright Brothers stage; but if all educators wait until somebody develops the supersonic flexible schedule, we are never going to have one. Some have to attempt now to build the kinds of schedules we are aiming for; and once we get to the year 2000 and have some type of supersonic schedule, we will then ask, "Where do we go from here?" The same question could be asked the aircraft industry; where is the airplane going after the year 2000; or should we say, where is the rocket going after the year 2000? But suggestion nine was that of planning on-going evaluation; basically this analogy to the airplane can be tied to evaluating the current development in the scheduling process. Do these new methods of scheduling offer promise of helping students and teachers? We must decide where are we going, and schools must make a decision whether to stay on the old traditional schedule or move into some kind of flexible scheduling, using perhaps one of the seven methods discussed in this presentation.

Suggestion number ten, the problem of selling and implementing, leads to the point that if we are going to schedule differently, some educators must begin, and begin now.

We can perhaps summarize by saying that creation and implementation of new programs cannot wait for perfection. The concepts of daily scheduling, individualizing instruction, and student freedom and responsiblity are just three of the 63 we could have discussed in this particular chapter. A small book could actually be written about each of these three discussed.

The important fact of this entire chapter is that many educators now believe we can implement better schools if we are committed and creative. We are at the threshold of a great adventure in education. A start is needed today to develop the kinds of educational programs that we know are possible. We can develop that educational rocket soon.

Chapter 7

EVALUATING PRESENT PROGRESS

In Chapter 3 we developed a rationale justifying on-going innovation; now we face the task of evaluating the changes that have been or are to be implemented. One of the things we have failed to do effectively in schools for many years, including the programs of the traditional schools, is really accurately evaluate what we have done to students, and what we have actually achieved. Most of the programs and procedures in the schools have been based upon whims, individual beliefs, group compromises, and group achievement tests; they have not been based upon sufficient evaluation and research. We must make a commitment then, as we begin to innovate, not to repeat the same mistake that the conventional schools have made all these years. The only evaluation we really have had in schools, for the most part, is evaluation of content, and that content which was chosen was based upon authoritarian decisions of teachers and administrators and testing and textbook companies; these groups decided what items were really important for boys and girls to learn; most of this material has been irrelevant.

As we look at the 63 or more elements, renovations, revisions, and renewals that are now upon education, we must ask: have these new proposals made any real difference? Will they in the future? Have such notions as self-direction, responsibility, decision making, behavioral objectives, continuous progress, affective domain, diagnosis and prescription, perception, individualization, team teaching, flexible scheduling, team planning, non-grading, UNIPACS, new curriculum projects, new directions in teacher education, conferences on change, workshops, large and small group instruction, independent study, retrieval systems, computer scheduling, resource centers, acoustical flooring, human relations, planning centers, pods, student centers, television, and all the rest actually improved the process of education for the boys and girls of America? Have any of these really made any difference in the classroom--any difference for Pete and Sally--and if so, has it been a positive or negative difference?

There is really nothing very much new in evaluation methods. The innovators here have few secrets. We already know what methods of evaluation are available and how to use them. The basic problem is a failure of the American system to build in and provide for true methods of evaluation of any of the programs. What we have done in most districts is to rely on so-called standardized achievement tests, and teacher judgment report cards, which really said very little, except to reinforce the notion already known, that schools are failing to meet the needs of a society in transition.

If a school or district decides to begin a thorough evaluation, the methods are almost too simple to suggest. First, we must ask whether present programs are meeting their objectives. This is not just more philosophy; if we cannot clearly state objectives and then measure success in attaining them, we are in trouble before we start. Most schools, however, have not objectively accomplished this task. There is need for innovation in evaluation. More reliance must be placed on subjective evaluation.

Once we decide to look at objectives, and become involved in a continuous, forevermore, process of on-going evaluation, thoroughly questioning success, we pose some additional dilemmas. Should we change again? Obviously, to attempt an answer, we must first complete the task of gathering information to determine whether the original objectives have been reached.

To seek the conclusion, we need to ask six fairly simple, basic questions--ones we have all asked before, but sometimes have not carried through to completion: WHERE, WHAT, WHY, WHEN, HOW, NOW.

The first of these, and a continual probing that must be part of the constant recycling which occurs under the concept of on-going evaluation, is merely the above plain, unsophisticated query: WHERE are we? What have we actually accomplished in the schools? What are present schools like? What is happening to boys and girls attending them? Are we satisfied with where we are, or do we need to change?

If we decide we would like to consider making some changes, WHAT do we want to do next? What changes do we want to make, assuming we have decided to innovate. Next, are we really clear as to WHY we want a flexible schedule, for example, or are we doing it just because it seems to be "the thing to do."

The next question is WHEN do we want to make the changes? It is important to know whether we plan to make the change immediately, or in March, or not until next September. A fifth inquiry we must continually make, once we accept the concept of an on-going process of evaluation and have asked where, what, why, and when, is HOW can we best implement the proposed change? The HOW is where we discuss the nuts and bolts. How can these things possibly be achieved? Finally, the NOW are we any better? And that completes the cycle and starts the staff all over again, for we are soon back at the WHERE are we stage; in planning innovation, we must provide constant evaluation.

There are several types of evaluation; we must know what we are aiming for at the particular moment. Are we interested in the continuous day-by-day assessment that must occur, or the constant input that is necessary, or a check on the logistics of the experiment, or the end result? Process evaluation is pretty much a day-by-day, year-by-year continuing approach. Product evaluation may be after one, two, or fifteen years. We have to know whether we are after process or product or other types of evaluation at the time we evaluate. We further have to know for whom are we seeking answers: for students, for teachers, for parents, for developers of new programs, or for the funders, such as national foundations which might be providing financial support to the project. We must ask ourselves what kinds of items we are trying to evaluate. For example, evaluating curriculum materials may call for a look at the scholarship of the curriculum package; it may call for a look at the reality situation on which it is based. One thing for sure, the conventional college textbook experimental design is not always best; it is usually impossible to control all the variables in a school.

The next concern in introducing the problem of evaluation revolves around the notion that evaluation is a MUST. We can no longer afford to continue to run traditional schools or to attempt to innovate without knowing what we are doing. But if evaluation is a must, what is evaluation? The resisters to change like to get the process of change tied in semantics, and here is one area they attempt to control; as usual, there is no easy answer; there are many definitions. It might simply be fiscal accountability for the tax dollar, or it might be termed a systematic approach to gathering knowledge or information, or it could be, as the dictionary might say, determining the value of, to examine, to judge; but regardless of what we finally agree upon as a definition, we need to evaluate.

As in most processes, there are several steps in evaluation that must be completed. First, we need to identify objectives. What is it we are actually trying to do in the schools with boys and girls? Secondly, we have to implement programs to reach those objectives. And then third, we must gather information to answer the question: have the programs that we implemented allowed the school to reach the objectives? There are at least 250 procedures for gathering this kind of information, arranged from simple surveys and questionnaires to rather elaborately prepared laboratory procedures for research in the area of psychological, psychomotor, and physiological development.

In attacking this problem of evaluating change, rather than to try to lay out a prescription as to how we can evaluate, the techniques that are possible, the 250 procedures that are available, or specific projections as to how a school might set up an evaluation program, in this chapter we will take a different approach. There are many people who are researchers, who are evaluators, who are trained in this field, and who can do a much better job than possible here in spelling out how to set up a specific evaluation project. The theme that is stressed in this particular chapter is that we must evaluate, and we must have available those kinds of people who can help set up evaluation projects; if we are in a rural area and away from the so-called experts, we must get hold of some written material, make some phone calls, use current regional laboratories, and otherwise search for potential help to establish an evaluation format.

What this chapter attempts to do, in terms of evaluating change, is to give a series of examples as to why schools must evaluate, and why educators do not really know the answers to the reasons the present schools are conducted in the manner they are now. We want to look at the evidence we have already about schools, and point out the fact that we really have not evaluated traditional programs; the defenders of the status quo expect the innovators to produce the evidence; there is no reason we should defend innovative programs anymore than they must defend theirs. But rather than take the negative point of view, knowing that traditional schools are in error because of their failure to evaluate and to change where what little evaluation they have done shows them to be in error, we want to take the positive side. Innovators want evaluation of their programs even more than the traditionalists, and even insist that information be gathered so that results of the effort are available and are used to improve the school.

In the preceding paragraphs, broad statements have been made concerning a commitment to the area of evaluation. Now it is time to look at some of the research that is going on throughout the country to show perhaps a little more clearly why evaluation is such an important factor. Most educators are aware of the research and development centers that have been established around the United States. In 1956, the U. S. Office of Education spent about a million dollars on educational research; in a recent fiscal year, it spent about one hundred and seventeen million dollars. The R & D Centers that were established at such Universities as California, Stanford, Georgia, Texas, Pittsburgh, Oregon, Wisconsin, and others were formed to study such areas as higher education, teaching, individual differences, behavioral sciences, educational administration, and other important topics. More money was spent on educational research in a past given year than in the previous ten years combined. We know more about boys and girls now than we have ever known before.

Sociological considerations are coming into the picture. We know from results of Title I that those programs in the original stages were deficient in changing teacher attitudes. In the medical area, in one small study, as an example, of 97 children, 95 had intestinal worms; others had such as broken legs, deformities, and heart murmurs; one third of the headstart children in the early studies had health defects and 31 per cent had major physical defects; 2 out of 3 needed dental work; 10 per cent were severe psychological difficulties. We know that the projects with the greatest apparent success were those with the greatest involvement with parents. We know that minority groups of any kind can compete successfully with the majority groups when provided the opportunity and the frame of reference. With these kinds of evaluations in the area of sociological considerations, what do we do about the poverty home situation; what differences do sociological problems make in learning rates at school? Is premium pay for teachers who work in the poverty areas part of the answer? Are educational parks part of the answer? Are residential schools and dormitories part of the answer? These are the kinds of evaluation we must have and the type of research we must commit education to if we are to know what to do with these boys and girls.

Look at the adult education situation. Project T Square was involved in training 22,000 illiterate adults to read. Some of the enrollees had as high as seven children. There are several million adults operating in the United States below the traditional sixth grade level. We know that the base of wealth is shifting from land to human resources. We know that education can have a retarding effect or a positive effect on the national economic growth.

Look at the situation in former coal mining areas, as an example of the shifting base of wealth. We are faced with the gigantic problem of eliminating obsolescence. Can we afford to spend millions of dollars developing a new automobile model and more millions for retooling it, and yet continue to have in the United States Project T Square conditions? What about an evaluation of values as regards the adult community? We don't have community colleges in so many areas; we should have them in every region or every major city in every state; there should be an opportunity for a student to take transfer courses, or terminal courses, to self-search, to eliminate obsolescence, or to become involved in some adult education program as a means of renewal and retooling. Projects help to show that 90 per cent of the current learning in most subjects is irrelevant. What kind of learning is important for human resources?

We have further statistical support. We know that jobs for the high school graduate rose 40 per cent in the past 10 years and decreased 10 per cent for the non-high school graduate. We know that the best schools and the best teachers are generally in the suburban areas, and the poorest in the slum and rural areas; yet children in the slum and rural schools are more affected by poor teachers than those in the suburban schools. Figures a few years ago showed it cost about $450 per child to educate a person in school, but $1,800 for delinquent youth in a home, $2,500 for a family on relief, and $3,500 to support a criminal in the state prison. If more than $450 per child were spent on education, and if the educational programs were revised, could we prevent some of the money being spent on family relief and state prisons?

Look at education's artificial requirements and rituals: trying to teach reading from 9:00 to 10:30 every morning as most elementary schools do, the silly Carnegie units, sixteen credits for graduation, two years of foreign language to enter college, 225 minutes per week to be accredited. These kinds of ridiculous requirements, and dividing students into bright, average, and slow groups or caste systems, have led in the past to a third of the students being pushed out of school, another third being in-school dropouts, and another third going on to college; of this latter third, most later drop out of college. What does a student need to be successful right now? What does he need in the future--we really don't know for sure. What are his abilities, what are his interests? Programs need to be developed on individual needs, not on artificial requirements..

The studies now underway in intelligence seem to indicate that there is not one I.Q., but instead 50 I.Q.'s; in other words, there are fifty ways of being intelligent or fifty ways of being stupid, whichever way a person prefers to be classified. There may eventually be uncovered at least 120 distinct abilities for each individual. Unless we know all of these individual estimates, we do not know the potential of that particular student.

We are faced too with the studies which seem to indicate that half development of selected characteristics occurs by certain "grade" levels. For example, general intelligence seems to be half developed by age 4, and general school achievement by the traditional grade 3. General intelligence appears to develop as much from conception to age 4 as it does during the 14 years from age 5 to age 18. A review of many studies seems to indicate that teachers in the initial years should be the best trained in the system, that the ratio should be at least one adult for every ten children, and that extensive diagnostic service for children and specialists to help teachers should be available at the Pre-K through second year periods. More money should be spent in the first three years of school than in any other three years, and yet, do we follow through with this particular research? No, schools still organize on the self-contained basis, with 25 to 30 children with one teacher in the first grade; the most money for any three years is spent at the secondary level.

Look at the research we have on so-called graded students. We know that only about 15 per cent of the students at any grade level are actually at that grade. In one school district, a study of the 7th graders showed that 50 per cent of them fell between the ranges of grades 7 through 9, the typical junior high: about 16 per cent at each grade level. The other 50 per cent fell outside grades 7 through 9: their range of achievement was grade 3 through 13. Yet we continue to have 7th grade programs where all of the students have the same book, and do the same work at the same time. How can there be a 7th grade curriculum guide, a 7th grade textbook, a 7th grade class, when there aren't any 7th graders? Out of a typical class of 28, only 5 really are so-called 4th graders; the other 23 fourth graders in the class range up and down the ladder of achievement. What are the implications for curricula, teaching strategies, and school organization?

Physiologically we know students in little league baseball, for example, range from age 7 to age 15; in spite of this, we still use chronological grouping; all over America we continue to put boys and girls into classes of 4th grade based on chronological age and give them the same program at the same time. Some schools have tried to solve this by setting up levels or track systems which have been even worse. In physical education we stuff students together on the basis of chronological age rather than on physiological age, and then give group prescriptions rather than individual prescriptions to meet the needs of these students. When are we going to pay attention to the research and evaluation that we do have?

If we are not convinced yet of the evaluations which show conclusively the enormous spread in individual differences, look at physical fitness index scores in a given school. A PFI of 100 is considered "average," though we know "average" means little. The thing that is important here is the spread of individual differences. In one junior high, for example, the spread of PFI's at the 9th grade was from a bottom score of 45 to a top score of 195; the 8th grade range was from 55 to 185, and the 7th grade from a low of 50 to a high of 170. The lows and highs are like trying to match a double motor moron against a double super allstar, yet coaches and administrators continue to talk about and schedule 7th grade physical education classes, where all the students play flag football at the same time, in spite of the fact that some of the 7th graders are only 4th or 5th graders developmentally and others are 9th and 10th graders.

Research is really very poor in education. Look at curriculum projects; when things like ITA come along, how are we to know whether or not these are better, or worse, or about the same, in terms of communication programs. Some districts adopted ITA almost overnight with very little research. Others refused to even consider it. Certainly if every district in America refused to try ITA, how could we ever develop any research and evaluation as to whether or not this might be a better way to help boys and girls communicate. On the other hand, if we all plunged in without any research and never did much follow-up to determine the effect of the program, of what value would this be? But certainly curriculum projects that are developed, such as ITA, could hold tremendous promise for breaking reading codes for many students. These projects need to be carefully evaluated, but not to the point that all wait four or five years for somebody else to do it. Each educator has an obligation to take new materials that are developed and consider adopting them. If there are a number of projects going on near a school, or in a particular state, obviously each district may not have to jump on the band wagon for that project until some research is available, but there has to be some evaluation going on. Maybe each district, in a cooperative regional approach, could tackle one program new to that area.

As we look at curriculum, consider the continued emphasis on grades such as A, B, C, D, and F. The curve still holds in most districts; overall, when comparing numbers of grades given, teachers in a class give 3 A's, 6 B's, 12 C's, 6 D's, and 3 F's. Some of the teachers are beginning to ask themselves a rather soul searching question: "Couldn't I reach more than 50 per cent?" We certainly don't reach the D's and F's; we certainly don't reach some of those C students; how many of the A students could have had AA if we gave such a grade, and allowed them to progress at that level? If the current unemployment statistics continue, by 1975, 32 million adults will be on the labor market without a high school diploma. We still have college dropout rates of 60-75 per cent. Fortunately some teachers are beginning to say, "I am a good teacher, but I am looking for ways to become a better teacher."

As they begin to evaluate their teaching, they become concerned about individual differences. They ask themselves, are we teaching groups, or are we teaching individuals? Oil and water do not seem to mix. Neither do individual differences and conventional report cards. If there are 400 students in a school, there should be 400 individual standards, not one or five group standards; obviously this raises the question, is there a role for group standards? If so, what is that role?

We must eliminate this reliance on A, B, C, D, and F. If we believe in individual progress, individual differences, and individualizing instruction, we can no longer continue to look at 10 per cent of the students as A's, 20 per cent as B's, 40 per cent as C's, 20 per cent as D's, and 10 per cent F's. And yet some teachers still grade on the curve.

We need to look at student evaluation differently. We need to look at individuals. There are many ways we can do this; class rank, grades, and Carnegie units should go out the window immediately. We need a new era. The schools need to revolt against the colleges. Every state in the union could eliminate grades in the high school overnight if the high schools in that state refused to send the state colleges such ridiculous items as Carnegie units, grade point averages, grades, and class ranks. The colleges would soon figure out a way to admit the students. Their jobs depend upon it. In the meantime, we need to individually diagnose the individual as to the progress he has made in his individual program. As was made so clear in the eight year study of the 30's, there needs to be a whole new era in appraising and recording student progress.

There are many ways to do this. A few moderate communities are giving both the standard A, B, C, and then a second grade called his individual progress grade. Thus a student might receive an A when compared with others, but only a C in terms of his individual growth. Others have substituted actual scores in subjects where this is appropriate. For example, Sally types at 40 words a minute with two errors. The group mean of all beginning typists is 30 words a minute with four errors; Henry types at 10 words a minute with seven errors. Now Sally doesn't get an A, and Henry an F. They get a record of what they are actually doing; Henry hasn't failed--he is typing at 10 words a minute with 7 errors.

A few communities have ventured into a superior, good, pass system; they are giving only three grades instead of five. No student receives a D or an F. Either he completes the work to the satisfaction of the objectives established for him, or he just doesn't get credit. In other words, he either completes the course at a certain level of success, or it just isn't recorded; it is neither a failure or a pass--it is just as if he never attempted the course.

But only a few are on the cutting edge--only a few have eliminated all pass-fail, or SPG, or ABC systems. Only a handful of districts in America have taken a bold new step. Wilson School is one which has. Fortunately, some of the imaginative educators in America are exploring for something better.

In replacing the old report card systems, there are basically four steps that must be taken to ascertain the individual progress made by each student:

(1) Diagnosis: Each student must be individually diagnosed for his strengths, weaknesses, and his progress to date in the area being considered.

(2) Prescription: On the basis of the diagnosis, which reveals the individual's needs, interests, and abilities, a program must be planned in conjunction with and for each student.

(3) Evaluation: Approximately every two weeks, through individual conferences, checking folders, and other such devices, the progress of each student must be ascertained. We must know how the student is faring with the prescriptive program planned for him.

(4) Alternatives: As the progress is ascertained, there may be a need to re-diagnose, or re-prescribe; the program may be too hard or too easy, or may not motivate; it may be that the present program seems appropriate and therefore the student continues. There must be alternatives; this ultimately leads to a re-cycling so that a constant check on progress is available.

To report this to parents, other schools, and colleges, several formats may be used. However, they must include at least three major items:

(1) A report of the program being pursued by the individual--the parents and colleges should know the objectives being sought and the materials used to reach the objective.

(2) The progress made in the above program must be reported. Did the student attain the objectives sought?

(3) A future prescription must be stated; in other words, based on the progress made in the program which had been pursued, what is planned in the future for the student?

For colleges, these reports may include results of standardized tests such as college entrance examinations, as well as columns indicating the program pursued, the objectives attained, and a subjective recommendation as to the future. Colleges could thus receive a report in the area of mathematics which would be a four column summary of the student's achievements: column one could state the math programs pursued in high school; column two could report the objectives attained; column three could relate scores on standardized tests in math (but only tests which attempt to check on the objectives sought), and column four could describe the recommendations of the math teachers in regard to anticipated future potential in the field. Record sheets in each area, including activities, some of which could eventually be computerized, would certainly be more meaningful than grade point averages.

As to suggested practical steps that faculties can take to operationalize such a system, the following guidelines are offered.

(1) The teaching teams should meet to plan for conferences, to decide on formats of report forms to be given to the individual student counselors, and to discuss the format of the conferences, and the method of scheduling the individual conferences.

(2) Each teacher should individually evaluate each child in much more detail than when completing the old report cards. They should try to diagnose and prescribe. They should say, "This is where he was when he came to me in September, this is where he seems to be now, this is where he seems to be headed;" then they ask, based on the strengths and weaknesses of the individual, "Does the progress seem to match the student's interests, needs, and abilities?" They should identify the prescription being used for each child to maximize his strengths and overcome his weaknesses. They should know the student better than they know themselves.

(3) Each teacher should then have an individual conference with each student to discuss his or her progress to date, and to suggest future directions. The student should have an opportunity to discuss with the instructor his feelings toward the success he has had during the school year. Take time for many of these short individual conferences with students--in the long run they are superior to large group classes.

(4) Record the information about each child on the evaluation form which is being used for each class, or subject, or team. We should not be interested in above average, average, and below average ratings, but instead concerned about individual progress made. Each check sheet should identify skills and concepts being pursued by the individual learner. These can be combinations of behavioral objectives, check lists of skills, chapter content, completed projects, or other, depending upon what has been accomplished in curriculum and individualization to date. They can primarily be written teacher comments, but they must be specific enough to know that this seems to be the diagnosis for the particular child, and this seems to be the appropriate prescription. For example, the patient has appendicitis as the diagnosis--the prescription--surgery next week.

(5) The team should then meet to make sure each teacher-counselor understands the forms or check sheets used by various teachers in the team. Individual sheets for each student from each of the subject areas or various teachers are given to the counselor to review in detail. Every student should have several folders in school. One should be his

permanent folder which is kept in the Counseling Center; another should be a yearly progress folder which is kept by the consultant-counselor or "advisor," as a record of achievement and growth during the year. Others should be kept by each individual teacher for each child in the particular subject area. For example, each student should have a math, English, and art folder, as well as his yearly progress folder, and his permanent one.

(6) After the counselor has reviewed each of the folders for his individual counselees, the counselors of each team should meet as a group to discuss together as many individuals as possible. They should start with those with whom they are most perplexed at present, but over the year every student ought to be carefully considered by the team. This type of team approach will enable teachers to ultimately know students much better than was ever possible under the MY STUDENT AND MY CLASSROOM approach.

(7) The counselor then can prepare for conferences with the parents and reports for other teachers, schools, and colleges. The counselor can report on all courses taken by the student as well as a summary of all knowledge possessed about problems and growth in the cognitive, affective, and psychomotor domains. The counselor may or may not want to have the student as well as the parent attend parent conferences. The form of the conferences can be individualized to suit each teacher, and whether individual teachers are scheduled out part of each day, or whether we close parts of the school for half days, or several days, or whether we meet in the evenings for some and give compensatory time for teachers for conferences, is not terribly important. Whatever manner members of the teams feel that they as a team, and as individual teachers, can be most effective should be the criteria; the evaluation approaches should be arranged to fit their patterns. Generally, conferences for half a day seem to be effective for most people. If each of the counselors have 15 to 20 counselees, they should decide whether they want 15, 20, or 30 minute conferences, depending upon the purpose. The length of written reports can be varied in the same manner.

(8) When conducting parent conferences, if a parent is satisfied with the conference, fine. If the parent is satisfied with all but one report and wants to see that individual teacher, an additional conference can be scheduled. If the parent is completely dissatisfied and wants to see all of the teachers, the school should attempt to set up a team conference at the school's convenience.

(9) By the end of the first year, these evaluations should be quite sophisticated. Over the years, they will continue to improve; all these steps may not be possible this first attempt, but each teacher and each counselor must do their very best to know each individual as well as possible; the teacher-counselors must be able to report on a diagnosis-prescription basis the progress of each child to each parent. Remember the students have chosen the teacher-counselor in most cases as one they can relate to and they have confidence in. Each counselor who feels that perhaps they do not know a particular counselee as well as they should, MUST be sure to have more individual conferences with that student soon. This system makes each teacher a counselor-consultant. Schools can then use their trained counselors in true counseling roles, and not as glorified clerks like most are now.

One method for scheduling conferences is for schools to plan on two parent conferences a year--one in the fall and one in the spring. In addition, one or more of the teams may decide they desire a third or fourth conference, and individual counselors or individual teachers may schedule conferences whenever they desire as needed. The types and numbers of reports sent to other institutions may also be varied. Even better than formally scheduling "you all come" conferences, parents can be given two to four "blank checks" for the year, and whenever they want a conference, they use one of their blank checks. They send in the request for information to the school; a check list response showing per cent of course completion and to what degree satisfaction can easily be gathered and mailed home. If the parents are satisfied, no personal conference is necessary. If they want more information, they can call for a session with the advisor and/or teachers.

(10) The teams should agree to a general format as to forms that are used, but each teacher should individualize the report according to the objectives sought. In other words, individual teachers may create their own report forms, but the team should be in agreement as to the general type of report to be used, so that interpretation by all concerned may be facilitated. The individual student folders as compiled by the counselors are passed on to next year's counselor, with any pertinent permanent information recorded on the individual's file in the office. This information can be forwarded in the case of transfers and graduates.

High school teachers may use individual forms for conferences as agreed to generally by the team, but individualized for teachers and subjects. However, the high school must also reach agreement as to a written form that can be sent on to colleges and employers. Schools should attempt to reach agreement with colleges which serve their constituents as to the format acceptable to both the high school and college as a method of evaluating students. While negotiations are underway with traditional colleges the first year, separate lists with A, B, C, marks can be recorded on forms to be used in case one of the students applies to an obsolete college that will accept nothing except grade point averages. The school can go back and figure up a G.P.A. for that student, as schools should not deny any individual the opportunity to apply to any college he desires. Though the college is wrong in requiring grade point averages and grades, high schools are the ones who must be flexible enough in the present stage of development to provide whatever the students need to get into college. Hopefully most of them will accept the proposed forms. Schools have found that the better colleges are most willing to work with schools and accept the students without the usual rituals. The Wilson School did not give any grades of any kind or keep a separate file of ABC's. The philosophy says no group comparison report cards, so none were given. All students who desired got into college.

In addition to the achievement evaluation, there can be a separate attached form filled out by the counselor, which would cover student activities and other information of value for the colleges. The schools can send along cover letters explaining the nature of the experimental programs and ask for their cooperation in accepting students in these pilot efforts. High school teachers should try not to make their evaluations read average, above average, and below average; they should try to develop something that is meaningful to the colleges and tells them more than we have ever been able to do with the A, B, C type of report.

Depending upon the forms being used, if a student were taking seven courses, for example, the college may receive a form for each subject as prepared by the teachers of that subject on a cumulative basis, plus one summary sheet on activities and other objectives. Thus a college might receive eight statements about the student. The size of these forms should be determined by the team; a start is needed in each school, and even though all will need revision, they can be used nationally to get the movement started. Ultimately, much of this type of reporting can be somewhat formalized, but the first attempts at evaluation should be by hand, and individualized for students and school programs as much as is possible.

One thing to remember is that no student should get a D or F grade or the equivalent. In other words, a student does not pass or fail--either he completes the course to the satisfaction of both the student and the teacher, and thus one of these forms is filled out for him, indicating completion, or he just has no form at all, indicating he never took the course, or at least never completed it. If a student is having difficulty in a course he is pursuing, right then it must be determined whether or not the course and objectives are right for that student, or whether they should be modified. Generally speaking, if a student is doing poor work, it is the fault of the school by having him in the wrong requirement, or having failed to personalize the program, or having provided the wrong prescription. When we are sure it is the student's fault, and this is sometimes true with students who have problems in the area of the affective domain, we ought to do everything we can to overcome the difficulty the student is having, so that he can pursue work that is meaningful to him. Usually advancement in the cognitive area will occur when the hang-ups in the affective and psychomotor domains are cured.

If a school is in a community where some parents are just extra hard-core about report cards, there is a way to solve the situation. Develop the concept of optional report cards. Why should those who don't want them be forced to receive them because of a group of resisters. Have a parent meeting one night; the administrator can preach no report cards, followed by a panel of teachers and parents. During the question session which follows, almost always some one insists on having a report card. At that moment say, if there are still some of you who want report cards, even though the school doesn't advise them, leave your name in the box at the back of the room; then make a list of all those students and tell teachers if they have one of them, then mark their papers with red pencil, keep grades, and every nine weeks send home a report. This optional method generally works beautifully. Use the same concept on hall passes, attendance slip, and other. The best schools don't have any; no student has to bring a note from home or carry a pass, but if some parents insist, let them send a note.

As we look at the evaluation of individual students, we must keep an eye on future developments. What about the chemistry of learning and memory? Will we within ten years actually be enhancing learning with an arsenal of drugs? Will we truly discover and be able to use at the practical school level drugs that may affect different parts of the learning process such as analysis, memory, and comprehension? It sounds fantastic and maybe is, but on the other hand, such a development could be just around the corner.

And what about the future of technology. If it is true that we double the world's knowledge about every eight-ten years now, and that it takes 100-200 professional hours to presently develop one good hour of professional material which becomes obsolete in five to seven years, what are we going to do with present and future curriculum developments? What role do such terms as microfiche, microfilm, random access, rear-view projection, microfilm readerprinter, terminals, microfiles, micro-transparencies, dial access, and computer based instruction have in the classrooms now being constructed? Certainly an evaluation of the total classroom procedures is going to be forced upon educators in the very near future.

Speaking of classrooms and construction, look for a moment at the evaluation beginning to be made of the present schoolhouses. In spite of the view into the world of 1980 and 1990, we still continue to build monuments to memory. Many of the schools being constructed now may be standing in the year 2050, and yet we know that these traditional schools with solid walls and rooms 28 x 28, or whatever the dimensions might be, are already archaic. Twelve per cent of the school buildings in America are pre-1900 vintage. Another 36 per cent are pre-1920. Why is it that half of the school buildings in the United States are obsolete, in terms of facilities and educational programs, and yet communities will not move forward to eliminate these worn out buildings and the programs they house? Schools should be built for only 20 years and then replaced. We haven't sold this idea to the American public. Instead, we turn around and build a new school designed along the lines of the past egg crates. Only one-sixth of the cost of the building is the initial construction.

The upkeep and maintenance makes up the rest. Should we remodel or replace old buildings? Certainly when the cost of remodeling approaches 50 per cent we are justified in demanding a new building. Yet most of the schools in America are going to have to be remodeled more than 50 per cent. If we can build instant campuses in 70 days, what is next? If educators had the billions of dollars that have been spent planning supersonic airplaners, could we really do a better job of evaluating and designing educational programs? Could we truly develop an educational supersonic? Would we come up with geometric domes, with paper classrooms that could be modified in a moment's notice? Are the buildings currently being designed really going to make significant contributions to the growth of human resources?

And what about programming-planning-budgeting systems. Is the money we are spending in education really being spent as effectively as it should? Knowing that we are short of money, could we not make the funds go further? Have the program objectives been identified behaviorally, and have we compared outputs with cost? If we state the objectives behaviorally, we should be able to measure them, and if we can measure them we should be able to come up with a cost analysis as to whether or not the objective that has been reached is in line with the cost that it takes. Have we developed specific measures of effectiveness in the schools?

We are going to have to evaluate comparisons of alternative methods in education. We must stop saying, "This is the way," but instead should say, "These are possible ways by which we might accomplish the task." A basic philosophy of the new innovation programs is to offer alternative ways of accomplishing the tasks, along with cost analysis. What price is excellence? How are we going to re-allocate resources? We can block or promote educational change with the way we plan our financial expenditures. If we look ahead and put one per cent of the total budget into planning, we can avoid paying $18,000 an acre, as we have in some suburbs now, when a few years ago we could have spent $2,000 an acre for the same land; but we must remember that whatever the decisions, budget A must equal budget B, in the final analysis of money available.

In the preceding paragraphs, we have made some general statements about a rationale for evaluation. It has been said that innovators are not evaluators and this is basically true. And probably innovators should not be evaluators. Evaluation should take place by an outsider--someone removed from the innovation, someone who can look at it objectively. We are beginning to get subjective evaluations of what we are doing as we try to change the American schools; we are getting surveys, and opinions, and attitudes; we are trying to look at this problem of self-direction and responsibility; we are getting some objective evidence. We can look at things such as attendance reports, discipline, library circulation, and achievement tests; we can set up control versus experimental groups. But we must go far beyond the traditional evaluations which occur in most schools today.

For example, we have talked about the concept of student responsibility. How do we measure student responsibility? How do we measure an individual's ability to make decisions, to make value judgments, to accept responsibility, to use time as a tool? What tests do we have now to determine how much responsibility Mary had in September, how much more or less in June? In the elementary schools, in the junior and middle schools, in the high schools, students must have opportunities to decide during the day where they want to go--to the snack bar, to the library, to the patio, to study, to the art room or a number of other places that are available to them. We must have alternatives for students to select if they are going to learn to make choices. Most innovative and traditional schools state that one of their prime goals is to develop self-directing, responsible, decision making individuals. If this is a prime goal, how are the schools going to measure their success? And yet this must be done; it is beginning to be accomplished in some of the forward-looking schools. More reliance must be placed on subjective analysis; control versus experimental "objective" designs are not always possible or desirable. Evaluation must be conducted in the affective and psychomotor domains as well as the cognitive.

The crucial factor is that as schools attempt revision, we must not only envision change, challenge change, develop a rationale for change, plan for change, organize for change, and implement change, but the total innovation program MUST provide for process and product evaluation. Without it the schools will never improve, and thus will never reach the goal of this book, to have successfully implemented different kinds of schools in the belief that these different schools will be better schools.

Chapter 8

REFLECTING MORE CHANGE

If the general thesis of this book is correct--that schools must change, can be changed, and by a mechanism much more recognizable than previously admitted--then perhaps now it might be helpful to reflect upon some of the guidelines presented in the first seven chapters, and ask if it is really necessary, in changing a school, to follow the somewhat formalized semi-structured process which has been proposed in this book--that of envisioning, challenging, rationalizing, planning, organizing, creating, and evaluating. Such a reflection should cause some questions. For example, haven't educators always planned change? Haven't we continually tried to improve schools? Hasn't education always had critics? What has happened recently to cause such a tremendous ferment of dissatisfaction with the present schools? Why are many individuals and groups now advocating an entirely new approach to education?

As a way of answering these and other questions, we might first summarize some of the major concepts presented in the previous chapters --concepts which serve as guidelines for revision. This should lead to serious reflection, and perhaps as a result, either confirm or reject current statements or beliefs about change; it could even lead to a revision of the entire change process in schools and to the future development of a method insuring constant ongoing innovation in all districts.

One of the most striking facts is that in order to be successful in change and to truly develop a significantly different program, the schools must engage in massive retooling. Everything in the school is affected. Most schools have tried to make only a few changes at a time. But now we know that a dramatic amount of quantity as well as quality must be included in the effort. The extent of this quantity is further reflected by the extensive annotated list of elements of change which is presented later in this chapter--elements which must currently be considered when changing a school, but ones which may not be factors in future educational programs.

One of the obvious cliches in the present society pointing to the need for educational reform is the rapid time table of change in all phases of American life. For example, if we try to put change on some type of historical continuum, only 10 years ago did man leave his cave; five years ago, writing was invented; two years ago, electricity was discovered; yesterday morning, the airplane was invented; last night the radio appeared; this morning we saw the first television; less than a minute ago, in this fantastic pace of change, the jet airplane appeared; and in the last second, we have come upon the world of manned space travel.

Another way of looking at this unbelievable rate of change in the American society is to look at the geologists time table, where we learn that in the development of the earth and life, what man has experienced is only a fraction of what he is destined to experience. If we put life on a one year continuum, at the start of the year, on New Year's Day, the earth coalesces. On Independence Day we have rock solidification; on Thanksgiving Day, the first life appears; on December 31, at 10:00 p.m., the forebearers of man make their appearance; 42 seconds before midnight, the birth of Christ occurs; in the 7/100's of a second which just passed, scientists learned half of what they know. In the next 7/100's of a second, it is predicted that they will double all that they know. With this fantastic rate of change, education must change too.

The problem with education today is that most educators are still operating no better than a 1930 model. Though the 1930 automobile was good, most people would not care to drive it as their major car now. It might be fun for a novelty, but not as the basic mode of transportation. And yet, in the schools we still use the 1930 model as the pattern of operation. We need to dream; what would we do if we could start all over? What kind of a school would we develop with all the knowledge, with all the resources, and with all the money, time, talent, and research that we now have available? Would we still develop self-contained classrooms with egg crate facilities and halls and walls? Would we still develop a high school built around bells ringing and hall passes? Would we still insist on the same curricula and the same obsolete requirements now operational in most schools? Most educators say no; if we could start all over, we would develop a different educational program.

But the problem is, how do we change the existing schools now? Part of the answer is that we need some change agents. We need people who can clearly state why schools cannot continue to remain 1930 models. We must become somewhat frustrated. We must work a little harder. We must accept the fact that we must anticipate and participate in a tremendous era of revision in the American schools.

One of the reasons that we haven't improved faster and done a better job is that we really haven't had any basic clash of ideas in American education. Yes, we have had some individual philosophies that have varied. Certainly we have argued about the methods of teaching reading, but as one visits schools around the country, generally speaking, education is about the same in most states in America. We have come to accept a standard or status of a certain kind of school, and we have established certain criteria for this school.

There have been and are great individuals in education. Many of them have spent a lifetime devoted to providing better schools. There have been many efforts. But until the last few years, we have really lacked dynamic leadership on a nationwide scale. The individual speaking out has been lost in the wilderness. We have had few really worthwhile programs. Even though millions of students have survived the present system, how much better could their educational opportunities have been if change had occurred much earlier. What has been the impact of recent educational improvements? Have they reached the classroom level? What has happened to Sally and Henry each and every day? Because we have lacked a real clash of basic ideas and issues on a national scale, the schools have continued to hum along pretty much in the same old way.

Finally we have recognized a few leaders who have been able to muster some support; thus the change movement is growing; we are headed for some tremendous clashes of ideas. In fact, we have already begun; these clashes should be healthy for education. They are going to make educators reflect upon the present schools, reflect upon the challenge to change, and reflect upon all the new ideas that have been proposed. We must decide if these new innovations are really better, and if they are, we must decide how we can implement them rapidly in the changing national society.

In considering change, it is usually helpful to look briefly at past events. For example, when we look through the history of American education, we come upon such proposals as these: (1) to provide learning experiences which appeal to the natural interests of children--instead of fixed, unvarying content, (2) to permit children to plan their own learning experiences instead of accepting only adult chosen activities, (3) to vary instruction for individual children and groups instead of teaching the same content at the same pace to all, (4) to teach with the aim of promoting a better understanding of the relationships among subjects and to the home and community, and (5) to teach through a variety of learning experiences instead of a single textbook. Do these five statements really seem radical now? Do they appear to be statements that we cannot accept? Most all current educators probably would agree that these goals should form parts of the present programs; some schools have already implemented these ideas, and yet, these are statements basically taken from the platform of the progressive education association, back in the 1930's. Why does it take 30 or 40 or 50 years to recognize excellent ideas? Fortunately, educators are beginning to move at a more rapid pace.

We certainly must move at a different pace if we are going to solve the problems of the inner city, suburbia, exurbia, and the rural areas. When we consider that in some regions of the country, 65 per cent of the people live on one per cent of the land, that in spite of a decreasing population overall in the inner city, the school population in that area has often increased by 50 per cent. When we consider the tremendous turnover in population in the inner city, when we consider that schools in the inner city are much more expensive to operate, when we consider that the first violinist in a major symphony orchestra could not teach violin in many districts because he doesn't have the proper education courses, when we consider we haven't learned how to involve the parents of the students in most schools, we suddenly learn we have what seems to be insurmountable problems to correct.

As we look at suburbia, what are we doing for the students who do not fit into the college prep curricula, which, unfortunately, most of the suburban schools still follow fairly rigidly. Now we have the new exurbia, where the people are leaving suburbia and moving beyond to set up different types of communities, hoping to escape both the problems of the inner city and suburbia. As we reach into rural America and see the problems of rural poverty, their current schools, and the general problems of sparsely populated communities, and then as we realize that 3 per cent of the population produces basically all of the needed agricultural commodities, we certainly recognize that we must do something to improve rural America; but even more pressing, what are we going to do to improve education for the vast majority of students who attend schools in the inner city, in suburbia, and in exurbia? Certainly, we have miles to go as we reflect upon the need for change in the United States today.

In considering the task of accomplishing the changes needed, we must have a different kind of leadership. We need superintendents and principals and teachers who are willing to break traditions. We need principals who will launch the ship without champagne. The original questions remain, however; how are we going to change the old buildings now in operation with all their conventional facilities, programs, and faculties? Can we build and develop new schools with different principals, different faculties, different programs, and different facilities?

We must have leadership who can envision a new kind of school; this leadership must create a new philosophical environment before change can be implemented. This leadership must plan flexible blueprints heading toward the 21st century; it must organize differently; it must see that new programs are implemented more rapidly. This means a tremendous amount of in-service training. We can't continue with some of the crude subjective and objective evaluations that are still in vogue; we cannot rely on comparisons of group standards and obsolete I.Q.'s. The new leadership must give direction in all of these phases if we are to truly develop change in education.

Further, the new leadership must help to develop teaching strategies where there is a different learning climate. We don't want rainy classrooms, where teachers act as spoon-feeders and speakers to groups of 25-35 children. We want them to be in sunny climates where teachers are listeners, motivators, and consultants concerned about individuals. We want them to get help from the computer so they can diagnose, and prescribe, and offer better alternatives than we have in the past.

The new curricula must ask questions related to scope versus depth. Is it important that we cover history from the prehistoric monsters to the latest development in Viet Nam? Is it more important to study in depth some rather important issues in the development of man? Are we going to continue to treat all the 8th graders the same? Are we going to continue to have curricula that is even labeled 8th grade? Are we going to develop self-paced materials that emphasize critical thinking and process? Are we going to be concerned in the curricula about man's quest for values? The new kind of school is going to reflect the curriculum changes which are being suggested around the country.

The patterns for instructing students in the school are certainly going to change; the organizations are going to be much more flexible. We are going to have things like flexible scheduling, flexible teaching, flexible grouping, flexible pacing, and flexible evaluation procedures. We are going to have teachers involved in planning together. We are going to develop the concept of student freedom and responsibility; the patterns by which we move students throughout the day are going to be radically different than in today's schools.

And as we have said, as we reflect over the previous seven chapters, the facilities must change. No school should be built now with permanent halls or permanent interior walls. They ought to be completely flexible arrangements so that over the summer, or over the weekend, or over any given year, very easily the walls, the ventilation, the fixtures, the lights, and all can be moved. We can't continue to lock people into school buildings 60 years hence; buildings must be much more flexible than they have been in the past. We need to take a look at the high rise schools where multiple occupancy may be practiced; on the bottom floors we will have shops, and above the shops parking areas, and above the parking areas housing areas, and on the very top of the high rise the school, with an inflatable dome for the gymnasium and artificial turf on the athletic fields, which are on top of the skyscraper.

We are developing tile with "hair," so that all schools will have acoustical flooring; they will all be acoustically dampened. We are no longer going to be arguing about whether carpeting or an equivalent substitute is appropriate. We are going to make more use of pre-fabricated walls, and systems such as the School Construction System Development type arrangement. We are going to build instant campuses and construct schools in 60 to 70 days. We are going to make more use of portable pools. Every child ought to have an opportunity, with the facilities we have now, for swimming during school, if we decide this is a valuable program for boys and girls. We can no longer justify lack of these kinds of facilities in any of the school districts today. The new accomplishments in technology are a tremendous asset. As we consider programs for the 21st century, we must reflect the need for an entirely different type of construction.

We now realize that change must become a continuous process, a rolling stone, a rocket to the moon, or whatever analogy we wish to make. We cannot any longer tolerate schools improving in spurts whenever a sputnik comes along, or a progressive education movement causes a little discomfort for a few years, or war time needs spell out certain deficiencies in the schools. Educational change is going to be a constant on-going process where we improve every day, every week, every year, making truly significant improvements. When the sputniks come along, we will not have to dramatically retool because we will already be in the process of retooling. Right now we are so badly in need of truly experimental schools, ones which are way out on the cutting edge of change.

This need indicates the possible adoption of massive improvements. We realize that perhaps these will not be appropriate in the late 70's or 80's, as we continue to pursue new and better ways to educate the youths and adults of the society. However, at the present time, we do have directions and goals toward which we ought to be moving, based upon current knowledge about boys and girls and educational programs.

There are many ways to attempt to indicate what some of these improvements might be. In this chapter we are classifying them in six categories: philosophy; instruction; learning; structure; technology; and reporting. There seem to be about 8-12 revisions in each of these six components which constitute a school.

Following is a glossary, or list, or short statements about each of the revisions. We should not quarrel over the wording, or whether or not the item is a "change"; each of these statements or notions or titles, in some way or another, whether they are combined with other ideas or treated as isolated notions, seems to have some role in the schools of 1969. Hopefully, each staff will compile their own individualized list for their particular school. The faculty, as part of the process of staff involvement, ought to each develop their own individual lists, and then as a staff hammer out a glossary of changes for that school. No staff should completely accept the list here; these are merely notions which perhaps constitute a change of direction in the schools, when properly implemented. They have been useful in clarifying thoughts as to the kind of school we ought to have now. If a school staff really does become significantly involved in the on-going process of improvement, this list should soon be outdated.

Component I -- PHILOSOPHY

The innovative schools have a carefully prepared statement of philosophy and purpose; the convictions expressed consider the following and other elements.

Element 1. The school is committed to ON-GOING INNOVATION.

Significant improvement generally occurs when there is a deep philosophical commitment that schools must be better, and that often, better means developing significantly different designs. Change as a continuous progress thus must be institutionalized.

Element 2. The school is committed to INDIVIDUALIZING INSTRUCTION.

No longer a cliche in college textbooks, it is now possible and desirable to individualize instruction. Materials and teacher training are the major hindrances. Each student should be working on activities designed for his individual needs, interests, and abilities. "Required for all" courses are basically eliminated; where required courses are demanded, assignments are individualized.

Element 3. The school is committed to CONTINUOUS PROGRESS.

Students should work through materials without regard for the "chapter" others are studying. Through SELF-PACING, as soon as they complete one set of materials they move right on to the next without waiting for the class or a group test. The materials are often student developed, and the length of time spent on them are usually determined by the student in consultation with the teacher.

Element 4. The school is committed to new ROLE PERCEPTIONS.

Teachers are seen as motivators and guides primarily working with small groups and individuals. They are no longer spoon-feeders of knowledge involved in large, grouped paced instruction or with classes of 25. They readily admit they do not always "know" what the adult of the late 20th and early 21st century must study.

Element 5. The school is committed to new TIME PRIORITIES.

All students do not need five 55-minute periods each week in high school for each subject, or 7½ hours of reading and language activities per week in the elementary. Individual time priorities are developed rather than group. "How much time does Sally need in a particular subject--not how much time does the first grade need."

Element 6. The school is committed to the concept of STUDENT RESPONSIBILITY.

Students should have at least a 50/50 relationship in making decisions about curriculum, policy, evaluation, new programs, and individual needs. Students accept responsibility when they have the right to share in the planning of school experiences. They learn that with freedom goes responsibility.

Element 7. The school is committed to the concept of SELF-DIRECTION.

The different world of the 21st century will demand more than ever that individuals be self-directing and self-educating. They must be given opportunities to learn those skills through independent study and responsibility time, not hall passes and tardies.

Element 8. The school is committed to positive approaches to MOTIVATION and SUCCESS.

New approaches to motivation and incentive are replacing gold stars, report cards, grades, failure, and pressure. Comparisons of unequals creates false values. Marking a paper "two correct" is better than marking it "eight wrong." Each child should find some measure of success each and every school day. Involving the student in making decisions part of the day as to what he wants to do, rather than insist on teacher, school, or group requirements, is one way to help insure success.

Element 9. The school is committed to EXPERIMENTATION.

Most school methods are presently based on tradition, not extensive research or thoughtful philosophy (ex. bell ringing). Experimental efforts are adding insight; magic regulations such as kindergarten entrance dates are being replaced by more logical and rational approaches.

Element 10. The school is committed to becoming a COMMUNITY CENTER.

Schools must become community investments to the extent that they are open where needed, 24 hours a day, 7 days a week, 12 months a year. Closing schools at 4 p.m. weekdays, Saturdays and Sundays, and June to September does not make sense.

Element 11. The school is committed to a 12-MONTH PROGRAM.

Learning programs ought to be offered on a twelve month, self-paced basis where the learning objective is the criterion, not the hours in school or the month it was learned. As an easy way to start, students should only be required to be there the state minimum number of days, such as 170 of the 365--minus the usual illness days--and should be able to take vacation in November or January, or March, or August or at any time it is needed, for as long as it is necessary or desirable. This is simple in a continuous progress school.

Component II -- INSTRUCTION

The innovative schools are involved in projects implementing current research findings, and are further researching new developments concerning instruction and learning; a few of the elements thought essential to explore now are listed below.

Element 1. The school is committed to exploring INTERACTION ANALYSIS.

Research indicates that most classrooms are dominated by teacher talk and student quiet work assignments. Yet these methods do not appear as productive as self-directed study and student interaction, which is presently very limited. Interaction and other method studies are underway in concerned schools.

Element 2. The school is committed to HUMAN RELATIONS.

Teacher and student perceptions of each other, teacher and student personalities, and the appropriate matches are crucial. The way adults perceive children appears to have a great deal to do with the way the child learns. Placing the child in contact with multiple personalities in team situations seems to enhance the possibility of the appropriate match of perception and personalities.

Element 3. The school is committed to developing skills of INDIVIDUAL DIAGNOSIS.

Individual diagnosis of each child is absolutely essential if individualized instruction, continuous progress, and self-pacing methods are to be utilized. Some good diagnostic tests are emerging in the early childhood area, but much more objectivity is needed in determining needs, interests, and abilities. Students in school must be treated as patients in the medical office--each must be considered individually.

Element 4. The school is committed to INDIVIDUAL PRESCRIPTION.

Interwoven with individual diagnosis is the necessity of individually prescribing programs for each individual. The schools must have a pharmacy of learning experiences. Matching curricula, requirements, choices, teacher personalities, and techniques with student personalities and learning styles is essential. A few schools are experimenting with computer decision making as an aide to providing alternatives. Other schools are developing subjective prescription sheets.

Element 5. The school is committed to writing LEARNING OBJECTIVES.

The innovative schools have concluded that general goals and objectives such as to appreciate, to understand, to know, to enjoy are no longer adequate as measures of specific student behavior. Teachers and students are writing performance or behavioral objectives that are measurable in clearly identifiable terms for each learning activity. A person who ----- is a person who -----, or, given -----, the student is able to -----.

Element 6. The school is committed to applying new research regarding INTELLIGENCE.

Intelligence scores and readiness for learning can be affected. There are probably about 120 distinct abilities for each individual, 50 of which are now known. The spread of abilities, characteristics, and achievements forces individualization of instruction. Innovative schools are exploring intelligence studies.

Element 7. The school is committed to aiding EARLY CHILDHOOD EDUCATION.

Research on characteristics and achievement of students gives new perception to the importance of the early childhood years. Learning experiences must be structured to insure that the child's skills and functions are developed before undertaking "first grade" programs for which he is not ready. Entering kindergarten children, age 5, actually range from 3-8. Innovative elementary schools are starting new 3-6 year old programs, and secondary schools are supporting with staff and time.

Element 8. The school is committed to analyzing the APPROPRIATE DOMAIN.

Investigation into the cognitive, affective, and psychomotor domains draws attention to the need to carefully consider the tasks being assigned.

Students with learning problems often have difficulty in the affective and psychomotor domains, but educators are still predominately prescribing work in the cognitive. Schools are experimenting with combination prescriptions in the three domains.

Element 9. The school is committed to PHASE TEACHING.
There is no conclusive research to justify classes of 25-30 all day in each subject. The evidence now points to teaching in five phases in each subject--large group, small group, independent study, laboratory, and one-to-one conference as being superior to groups of 30. Innovative schools are piloting efforts to find appropriate time allotments for instruction. The answer varies with the individual, but there are some general percentages.

Element 10. The school is committed to MULTI-MEDIA LEARNING.
Learning seems to improve for most individuals when multi-media approaches are used: visuals, listening tapes, records, television, video tapes, graphs--see, hear, feel, taste, smell approaches. Though not a new idea, the innovative schools are increasing the use of these approaches and conducting studies to determine differences in achievement.

Element 11. The school is committed to BUDGETING FEEDBACK.
Budgets should provide funds for planning for change. Many of the present innovations can be handled by a re-deployment of present finances. Other new ideas need additional money. In addition to budgeting for planning change and for actually developing it, funds must be available for evaluative feedback as to whether the program is actually worth the money invested, in terms of time and achievement, and in comparison with previous programs or other new ones.

Component III -- LEARNING AND CURRICULUM

The innovative schools are studying learning and learning theory and revising the entire curriculum as a result of recent research and experimentation.

Element 1. The school is committed to LEARNING ABOUT LEARNING.
Though there is still a great deal unknown about the way learning occurs, concerned schools are involved in extensive in-service sessions to increase staff knowledge of what is known. Teachers or specialists on the staff who understand learning psychology are being used as translators to help teachers build programs around how learning seems to occur for various individuals. The staff is fully aware of and involved in the many research projects attempting to learn more about learning.

Element 2. The school is committed to RELEVANT REQUIREMENTS.
There are very few things taught in a school which everyone *must* know. There are some things that *most* students probably should know, and other concepts, skills, or knowledges that *some* or a *few* should study. Perhaps 90 per cent of what is now being taught is not relevant for the society of 1980-2020, and almost that much is irrelevant for many individuals in the 70's. The innovative schools are attempting to solve the problem of curricular relevancy.

Element 3. The school is committed to PERSONALIZED PROGRAMS.

Each day, week, month, or year, depending upon the need, diagnostic discussions are held with and without the students to attempt to determine the best prescription for each child at that moment in time. It is thus assumed that a student may, for example, have two hours of individualized reading, 1½ hours of physical education, and one hour of responsibility time prescribed for a given day or longer, rather than the conventional hour each of English, history, math, science, physical education, and study. This means that such traditional courses as 7th grade English required of all are a thing of the past in the new kinds of schools.

Element 4. The school is committed to utilizing new CURRICULAR PROJECTS.

There are a great number of national curriculum projects attempting to develop better instructional materials in most subject areas. Almost all are better than the former basic and supplementary textbooks and therefore should be used; unfortunately most all are still written for group-paced instruction, and thus must be revised by teachers for continuous progress programs.

Element 5. The school is committed to MULTI-DISCIPLINARY APPROACHES.

Though most new national curriculum projects are developed around the structure of a single discipline, the forward trend schools are emerging with an interdisciplinary approach, or at least a multi-disciplinary one. The innovative curriculum schools are merging twelve subjects. Ultimately the materials will all be individualized so that they can be interrelated in almost any combination, or treated separately--ultimately one curricula.

Element 6. The school is committed to ASSESSING INSTRUCTIONAL PACKETS.

Before accepting new curriculum materials, the innovative schools are using various criteria to determine which one, which ones, or which parts of which ones of the many curriculum packages available should be selected. Currently the items to consider the worth of a particular program are being listed by some evaluations under the following ten steps or criteria for decision making: problem, assessment, direction, availability, learning, content, environment, practical, decision, and action.

Element 7. The school is committed to CONCEPTS and CREATIVITY.

Specific content is not particularly important in most subjects today, but concepts and themes still are valid. Africa as content becomes rapidly irrelevant--Africa in 1940 and Africa in 1970; but it is of value as a tool for developing basic concepts such as modernization. Schools are actually working to learn how to "teach" creativity, long a goal but with little accomplishment.

Element 8. The school is committed to PROCESS, INQUIRY and ANALYSIS.

Knowing the process of how to find an answer, knowing how to inquire, to seek information, to discover answers, to analyze results--process, inquiry, discovery, and analysis are important approaches to learning. The good new curriculum projects and the good new schools are developing materials designed to develop these learning styles.

Element 9. The school is committed to MULTIPLE STUDENT RESOURCES.

Students receiving "A's" and "D's" and spread ten years in achievement scores should not be expected to compete in the same curriculum. Neither should they be grouped by tracks. The exciting schools, realizing the extreme variance in learning frames of reference, have eliminated the required textbook and instead have substituted individualized materials aimed at a wide variety of abilities and interests, yet often focusing on the same themes or concepts.

Element 10. The school is committed to preparing SELF-INSTRUCTIONAL PACKETS.

Self-instructional learning activities must be prepared by innovative teachers. They are not available in most areas commercially. Learning kits, UNIPACS, contracts, individually prescribed assignments, and capsules are being used; rigid curriculum guides are partly being replaced by flexible materials students can study without personal teacher instruction or teacher presence.

Element 11. The school is committed to STUDENT QUEST.

After any basic teacher required and prepared study has been completed by the student, and after he has perhaps pursued depth concepts suggested by the instructor, the student should be able to continue in the same topic which has been left open-ended by the instructor; he may decide to QUEST an entire course--never meeting in a formal class situation--a course not required. Students who QUEST generally develop their own objectives, content, and methodology, and prepare their own lesson plans.

Element 12. The school is committed to STUDENT EXCHANGE.

Students learn more out of the school building in the environment conducive to the subject being studied; in learning a foreign language, for example, students should spend blocks of time in foreign countries, and foreign students should come to the United States--not just one or two, but entire classes and large groups. Depending upon community resources, students in as many subjects as possible should pursue part of the course outside the school building.

Element 13. The school is committed to GAMING AND SIMULATION.

These two notions by themselves are not that crucial; however, here they are symbolic representatives of attempts to find new and better patterns of classroom instruction.

Element 14. The school is committed to SELF-SELECTION and WINDOW SHOPPING.

Schools providing smorgasbord scheduling and optional attendance allow students to self-select the courses they want to study that day or year and the materials with which they prefer to work. This is practical on a K-12 basis, but is implemented a little differently at various levels of individual development. Window shopping eliminates the need for preregistration and original drop/adds. Students search until they finally find the right program for a period of time--they then indicate what they have decided to pursue. They then register and do not change until they switch an entire area--from English to Industrial Arts. This is noted on the office records. If they take English 12 years, they never have to drop/add or re-register once the original signup has been completed.

Component IV -- STRUCTURE

The innovative schools are developing new staff patterns, new schedule arrangements, and new methods of interaction and relationships.

Element 1. The school is committed to DAILY VARIABLE or DAILY SMORGASBORD SCHEDULING.

Schedules should be built daily based on the instructional tasks planned by teams of teachers, and by student identified needs and individual choices. In this type of open schedule, about 20 per cent of the time is planned by the teacher. The other 80 per cent of the time the schedule is open to approximately 10-25 choices, depending upon the individual level of maturity. The best daily schedules find students self-selecting from a smorgasbord offering--the restaurant menu. There are now about seven methods to accomplish this, but each calls for a compromise; any of the seven are now considered improvements over period 1-2-3 type schedules or self-contained rooms. Dramatic breakthroughs should occur in scheduling in innovative schools in the 70's.

Element 2. The school is committed to NON-GRADING.

Approximately 15 per cent of the students presently achieve at their designated grade level. Achievement scores range from "3rd grade to 13th grade" for "typical 7th graders." Therefore, the organization must be a non-graded mix of students, and the materials individualized to provide appropriate opportunities for the "other 85 per cent" erroneously diagnosed under the graded system. The task of the teacher is to spread the range of achievement without creating competitive or caste systems.

Element 3. The school is committed to TEAM TEACHING.

Two or more teachers, and their aide(s), planning and teaching together, maximizes teacher strengths, minimizes weaknesses; it provides multiple personalities for students, and improved perception for teachers. Teaming eliminates the concept of the self-contained room at all levels, K-12.

Element 4. The school is committed to TEAM PLANNING.

Team planning can occur in a variety of situations, but is essential in innovative schools. The learning team can plan a daily schedule and program for a group of students; a multi-curriculum team can plan interdisciplinary approaches; a single curricular team can plan experiences in a particular subject field; a design team can plan for the overall development of the school program; team planning is absolutely essential to success in team teaching. Team planning is a way to begin teaming without actually doing team teaching. It avoids some teacher personality conflicts; in the actual teaching act, team planning without team teaching, while providing many of the values of the latter, does lose those gained by teaching together. In the long haul, team planning is more important than team teaching.

Element 5. The school is committed to TEAM LEARNING.

This is formalizing a carry over from the rural school--the concept of students teaching students. Many students learn parts of the curriculum better from their classmates than they do from the teacher; they learn by discussing concepts with their peers. Small group, quest, and lab experiences can all be structured to provide for planned team learning and tutoring.

Element 6. The school is committed to FLEXIBLE GROUPING.

Homogeneous, heterogeneous, sex, interest, and sociogram grouping are all wrong if used as permanent methods of organization; all are correct if used flexibly and alternated depending upon the instructional plans for the day; eventually flexible grouping leads to a pooling of individual students; from the pool generate teacher requests for students, student request for teachers, or individual choice options.

Element 7. The school is committed to the use of AUXILIARY PERSONNEL.
Use of para-professionals (teacher aides or other types of generally non-certified adults) is essential to the development of improved programs. Some serve in the role of an instructional assistant; others fill clerical positions; still others serve in general supervisory positions (ex. playgrounds); some serve as special aides, persons who may serve as artists or audio visual technicians. Smaller schools often must combine these functions. If aides are not available as additional budget, the professional teacher ration should be changed so that the adult-student ration can be increased by employing aides. In any case, the certified teachers with whom the aide will work should interview and recommend hiring of the aides.

Element 8. The school is committed to DIFFERENTIATED STAFFING.
The better school districts are moving to twelve month contracts and a shortening of the time actually spent in direct contact with children each day, to allow for team planning and curriculum development to occur during the school day and throughout the twelve month school year. Schools are staffed somewhat like hospitals: there are master teachers who diagnose and prescribe (doctors); there are staff teachers who carry out the prescription, but who are not qualified to perform some of the required tasks (nurses); there are para-professionals who relieve the professionals from tasks not requiring as much training (nurses aides); there are specialists such as automation technicians, psychologists, artists, and other (lab technicians and hospital specialists). There are candy-stripers who volunteer (parent or older student volunteers). Many of the above individuals are hired on a twelve month basis, but some will work fewer months of the year. This means teacher training must change; the innovative schools are now working with colleges on internship programs.

Element 9. The school is committed to INTERSCHOOL COOPERATION.
Smaller schools and smaller districts cannot individually provide all the services and technological developments needed in today's schools; neither can they individually develop enough creative ideas to improve education rapidly; large districts, though possibly providing more services, also cannot keep abreast of all the innovations. But schools and school districts working together can; a confederation of schools and/or districts can share financial costs, technological development, specialized services, and innovative ideas in almost all situations.

Element 10. The school is committed to new DISTRICT PATTERNS.
New patterns of school district organization are emerging to replace the unsatisfactory 6-3 or 8-4. Though no one knows the best system, if there is one, there is evidence the 6-3-3 is not the answer. Current trends lean toward the educational park concept K-12, at least implemented that way in program if not in facilities. Other systems, looking toward the middle school trend, are adopting a 4-4-4 pattern. Further, neighborhood attendance lines are finally being eliminated in favor of matching school philosophies with individual learning styles. The point

here is that the innovative schools are searching for better arrangements than 6-3-3 with required neighborhood attendance lines. Many educators now believe a preK-14 school is best.

Component V -- TECHNOLOGY

The innovative schools are turning to automation and to new open learning facilities.

Element 1. The school is committed to huge STUDENT RESOURCE CENTERS.
Innovative schools are developing exciting resource centers to house 30-50 per cent of the student body for many individual activities. They replace libraries, which have always been underdeveloped, and study halls, which have had no other function than to police. These air-conditioned, carpeted learning centers have absolute quiet zones, semi-quiet browsing and study areas, and noise areas, in addition to housing the listening-viewing automation facilities for the school. Wet carrels and automated systems play an important role.

Element 2. The school is committed to TEACHER PLANNING CENTERS.
The new school plans call for teacher planning centers to replace the "classroom for each teacher" concept. In team planning there must be areas where teachers can easily communicate. These centers should have quiet individual work areas, group conference areas, individual conference areas, and relaxation areas. When possible they should be close to the automation/resource center areas, and to the teaching pods.

Element 3. The school is committed to OPEN PODS.
Large open learning areas with arrangements for large and small groups, independent study, and individual laboratory experiences are replacing the classrooms designed for 25 or 30 students. Large open noise areas with no quiet or extra noisy zones are wrong too. Where partitions are used, they are of the easily movable type, rather than permanent construction, and usually demountable rather than folding. In the coming years, as programs and functions change, the form must readily change too. As remodeling occurs, it is only for the 70's, and therefore should be easily remodeled for the 80's. Form should support function.

Element 4. The school is committed to ACOUSTICAL FLOORING.
The developments in carpeting have made mandatory the use of some type of acoustical flooring, which not only deadens sound, but provides a greatly improved aesthetic environment. In the past schools have often had acoustical ceilings and walls, but the greatest noise problems usually are from the floors.

Element 5. The school is committed to FLEXIBLE FURNISHINGS.
New developments in furnishings are finally allowing the gradual replacement of the traditional large, hard to move rigid student desk or table with more flexible seating possibilities. Schools should no longer order masses of the usual style desks and straight hard library tables and chairs. Both wet and dry carrels, soft furniture, carpet and other improve teaching arrangement possibilities. Birds and plants are important school furnishings too.

Element 6. The school is committed to COMPUTER BASED INSTRUCTION.

The use of computers will dramatically change the role for teachers from imparters of information to resource stimulators for individuals and small groups. It will relieve teachers of clerical and repetitious drill and provide a tremendous aid to the individualization of instruction. Already some complete courses can be taught by a computer. The potential of these programs on a national hookup is just developing.

Element 7. The school is committed to RETRIEVAL SYSTEMS.

Closely allied with computers, immediate access to viewing and listening tapes within a school, retrieval of information from local and national sources, and finger tip availability to large group material on an individualized basis will further revolutionize the role of the teacher. Though CAI, CBI, and retrieval systems are extremely expensive, schools are now using them. The innovative schools are installing or making plans to install these systems, but ones which are flexible so that they can provide for individualized instruction, not mass media feedback to individuals of group required content.

Element 8. The school is committed to TELE-COMMUNICATION.

In spite of present limitations and disappointments, there is an exciting future for instructional and educational television. Tele-lecture and tele-writing systems now provide opportunities for resource persons and instruction to a degree of excellence never before possible in many small schools.

Element 9. The school is committed to an increase in AUTOMATION BUDGETS.

Micro-image, micro-transparencies, micro-fiche and other types of technological developments are going to continue to force change in education. Schools must reflect the need for these items by increasing the percentage of the budget spent in their development. While awaiting the more expensive pieces of equipment, the innovative school makes sure that teachers and students have plentiful access to tape recorders, overhead and loop film projectors, films, and huge amounts of library type materials, including a flood of paperback and other short term resources. Video tape recorders offer perhaps the greatest immediate potential for all around, practical school use.

Component VI -- REPORTING

The innovative schools are developing new systems of student evaluation, program evaluation, and information reporting.

Element 1. The school is committed to INDIVIDUAL PROGRESS REPORTS.

The group type comparative report cards have been replaced in innovative elementary and middle schools by diagnostic/prescriptive parent-team conferences, behavioral objectives measurements, individual diagnostic testing, and subjective analysis ratings. High schools are just beginning to modify their forms as they fight against college-based traditions and superstitions such as Carnegie units, G.P.A.'s, and ABC report cards. The individualized reports focus on the progress of the single student, and not on a subjective comparison of him with a group.

Element 2. The school is committed to planned STUDENT CONFERENCES.

The school provides time, through flexible team and schedule patterns, for teachers to confer individually with students during the school day. These are planned as regular phases of the instructional program, not only in emergency or request situations. Great rewards seem to be occurring as a result of a 10-15 minute one-to-one conference each week or two, as opposed to no conference and five periods of 45 or 55 minute groups of 25 for instruction meetings.

Element 3. The school is committed to INDIVIDUALLY PACED TESTING.

Students should take tests that are as individually designed as possible. Innovative courses conducted on a continuous progress, self-paced basis allow each student to be evaluated whenever he is ready, not on some group schedule. Group testing of a diagnostic nature still has a place; group testing as a summary is valid, but the questions are general, such as "write all you know about your pursued area of independent study." Subjective group attitude surveys relating to student opinions are appropriate as informational devices, but the innovative schools have eliminated the practice of trying to test all students on chapter two at the same time. No one fails tests; they are merely means of evaluating how much a student knows about the subject being considered.

Element 4. The school is committed to COUNSELING COUNSELORS.

Counselors are developing open counseling centers, becoming parts of teaching teams, giving large and small group instruction, writing unipacs, diagnosing and prescribing for individual students, and guiding students toward career oriented opportunities where students find success. Heavy emphasis is placed on the elementary school level, and the concern is with appropriate learning experiences for each individual, not dogmatic subjective requirements. Counselors are becoming psychologists; their preparation should reflect this.

Element 5. The school is committed to INFORMATION FEEDBACK.

Innovative schools are making numerous changes. In many cases the actual measurable impact on the classroom has been rather negligible. Some critics are claiming that the changes are fad, not fundamental. The good experimental schools are now attempting to insure some measurement of what is happening to students as a result of all of the attempted innovations and research designs. This information must be accurately reported as feedback in the evaluation cycle. The good schools have statistical and interpretive analysis of the results of new programs.

Element 6. The school is committed to using EVALUATION MODELS.

In the attempt to gather information about programs and students, innovative schools are developing models to measure whether their programs are enabling them to meet their objectives. One currently in use is where context, input, process, and product evaluations are used as steps in an on-going and revolving cycle.

Element 7. The school is committed to different PUBLIC INVOLVEMENT.

A new era of public relations has been opened by the demand to explain new innovations to the public. The best critics and ambassadors of the new programs are the students, and thus they must be involved first in the public relations plans. "Honest sessions," truly informing parents and students of the many present deficiencies in the schools, and the real successes or failures achieved with new programs, are important phases of public relations. One of the greatest boons is that of opening attendance areas. If parents are dissatisfied, they are permitted to transfer students. Much pressure on innovation has been released by such policies. The new schools are thus attempting to develop new public relations programs, and new types of PTA's, and other parent organizations. Parent volunteers are an important part of the innovative schools programs.

Element 8. The school is committed to INFORMATION ACTION.

Many schools gather information about their programs, but seldom use it to stimulate new developments. For example, we have known for years the current foreign language and physical education courses in the public schools were not reaching their stated objectives for the majority of individuals. The truly innovative schools are attempting to develop new curriculum materials, teaching methods, and other in areas where the resulting information feedback demanded action.

Thus ends the list of 63 suggestions for school improvement; more could be added; some of the above could be combined. But if schools can implement the 63, they will be off to a good start. More are coming in the 70's and 80's.

If we are to be successful in implementing the innovations which have just been listed, we certainly must develop strategies for accomplishing the goals. We need to define, if nothing else as a start, the word innovation. In educators' vocabulary, can we accept the idea of innovation defined as a new idea for a given area, at a given moment in time? If a staff cannot accept this general definition, then before the staff can evaluate or measure successful innovation, they should define what they mean by an innovation.

We need to identify problems and identify who has decided it is a problem--teachers, administrators, or outsiders. What chance is there for successful change? Certain studies now seem to point to the fact that the innovation may be successful in the community if the solution has some importance to society, if resources are available, and, as the problem is tackled, there seems to be some probability of finding a satisfactory answer.

If change and innovation are to be institutionalized, it seems we must take the concerns of people and solve them. The problem of concerns might be illustrated by the pheasant in the South Dakota prairies; Mr. Pheasant reads a sign which says "No Hunting"; however, soon seeing a hunter come across the field, the pheasant runs, because he does not know if the sign is of concern to the hunter. The pheasant is concerned about his life; but what is the hunter concerned about at that moment? Is he hunting pheasants, or is he looking for a rabbit; or is he just target shooting? Individual concerns must be identified if we are to be successful.

We need to reflect upon the change in education that is presently occurring in the United States in some of the schools. Perhaps taking an area of a state like the northeastern corner of South Dakota, as an example, and looking at what has occurred in the last few years, may give some insight as to future direction and the possibility of successful change. The state of South Dakota, in terms of its educational system, has often been rated near the bottom in almost all conventional evaluations. Yet how do we really judge whether a state like South Dakota has the poorest schools or the best schools? How do we know what is actually happening in the classrooms? How can we compare a high school in South Dakota with a high school in New York, or California, or Mississippi?

Conventional ratings in the past have placed South Dakota near the bottom. It has ranked 49th in teachers' salaries. According to an article in the April, 1967, Nation's Schools, it ranked 49th in the acceptance of innovations in education. It has ranked 50th in support of higher education, and 50th in support of state aid to education. We could go on and on and mention the criteria which say that South Dakota schools do not measure up. But whether they do or not, there has been a commitment in South Dakota in the past two years to improve the schools. Whether they are the best schools in the country, or whether they are the worst schools in the country, or whether the movement continues or fades, in 1967 and 1968, the educational innovators in South Dakota began to say, we must improve what we are doing now.

In the first step in this direction, South Dakota's Title III funds were regionalized into four areas; the northeast area with a center at Watertown, the southeast area centered in Sioux Falls, the central area centered in Pierre, and the western region with headquarters in Rapid City. Each of these regions had the responsibility to help establish exemplary programs in their areas; they sought to help develop a philosophy for the need for change and improvement; they sought to help schools implement better programs for boys and girls. There was a tremendous commitment to move South Dakota from a ranking of 49th, no matter how it might be evaluated, to a ranking of first. South Dakota wanted to become an exemplary state for improvement in rural United States. It wanted its schools to rank with the best. But the problem was, not all South Dakotans felt this way. Many of the farm population still felt that schools were not terribly important, and that an eighth grade or high school education was enough, that teachers with two years of college are certainly sufficiently trained to instruct boys and girls, and that buildings that were built in the late 1800's and early 1900's were good enough, because they were good enough for their grandfathers. Unfortunately, many of South Dakota's educational administrators and legislators were of the same philosophy.

The Title III groups in South Dakota reflected upon the plight of education as it existed, and decided that if South Dakota was to move forward, several steps were needed. First, people had to be made aware of the need for improvement in the schools; second, they needed to be involved in discussions of how this might be done; third, there was a need to evaluate what was happening in the current schools, to take a closer look; fourth, there was a need to gain acceptance for some trial programs, to pilot some new ideas, to say, "all right, let us take a look at what this might mean and let's give it a chance"; fifth, there was a need to adopt some of the practices and put them into operation; sixth, after adoption, a plan was needed for reinforcement, to encourage and convince people that they were headed in the right direction; and seventh, there had to be evaluation to see if better schools were developing.

As we reflect upon what happened in South Dakota as a result of the regional programs, we see that the greatest progress was made among schools affiliated with the Lake Region Innovative Schools Project, the northeastern regional effort in Watertown; in one year, there developed a tremendous commitment to change, if change meant improvement. Communities in Brookings, Sisseton, Milbank, Watertown, Arlington, Waubay, Harmony Hill, Webster, and Huron to mention a few, began to commit themselves to change in their schools. Some moved ahead of others. The Brookings school system, for example, moved forward at a rapid pace. The Lincoln Learning Laboratory in Watertown became an exciting and different elementary school almost overnight. The Waubay and Sisseton Districts, and the Harmony Hill Parochial School in Watertown caused tremendous excitement and enthusiasm in a few short months by their commitment to new kinds of programs. But many of the schools in the Lake Region still have not begun to change, and as present leaders leave, there is no guarantee of a continuing effort. Within a year or two, the flame could flicker and die.

We often wonder how many ideas we reject in education without a hearing simply because experience patterns can recognize no parallel. The Lake Region Innovative Schools Project certainly calls for reflection, not only in terms of what was accomplished in one year, but what the future might hold. Have these early efforts to change been in the right direction; will they make a significant difference in the lives of boys and girls? How do we continue to solidify and implement the programs that were started, so that in 3 or 4 or 5 years, the Lake Region of South Dakota becomes one of the most exciting and exemplary educational regions in the United States. They had an excellent start toward leading the way for better kinds of schools in the rural areas of the United States. In one year, more outstanding consultants came to the Lake Region of South Dakota than probably any other single geographical area in the United States. It behooves every school administrator in that region of South Dakota to consider further innovation; the methods being used there may accomplish new directions and have a real impact upon national education.

South Dakota is a good state to look at when reflecting upon the need for change and the mechanism for achieving change. It vividly illustrates that change is possible, but also raises the question of how we can institutionalize on-going innovation, so that the brilliant starts made in several of the communities in the Lake Region do not fall by the wayside when the initial leadership moves on to other challenges.

The discussion of an attempt in South Dakota is pertinent to almost all states; most like South Dakota have had for many previous years a philosophy which said, "We would like to, we should, but - - - - -," and then they proceeded to list all the reasons why change was impossible in that state: no money, improper facilities, lack of equipment, lack of support in the community, and . . . and . . . and . . . . But in 1967-68, the Lake Region of South Dakota began to adopt a new philosophy. They started saying, "We must make these changes; therefore, what are the steps and the procedures, and the priorities to accomplish this change? What are the short range plans? What are the long range plans? How can we make the schools of South Dakota among the best in the nation?" There must be reflection upon the number who have rejected change, as had been the case in the past in South Dakota, simply because educators' experience patterns were limited and their own frames of reference could find no method of achieving what were thought to be impossible dreams.

What South Dakota needs, what the Lake Region of South Dakota needs, what most schools or school districts or states in America need, is what we might classify as Project Innovation. We must find better ways to educate boys and girls in the schools. We must overcome the problems that we know exist. We can no longer accept excuses. We can no longer live with the notion that we would like to, but! We must accept the notion that change is needed, that change can occur, and that we can improve the schools. The schools of University City, Missouri, the schools in South Dakota, and the Wilson School in Mankato, Minnesota, all prove that rapid, immediate change can occur. Those areas mentioned accomplished fantastic revolutions in two years. The problem they face now is continuation of an on-going forever movement.

As a means of starting, the concept of Project Innovation is feasible. For example, to achieve change, we need better cooperation between the universities and public schools. If the university in the region would sponsor one innovative project with an elementary school, one with a middle school, and one with a high school, the potential for exciting accomplishment from this cooperative venture could lead to further change on a massive scale. If the universities would cut, for example, two-thirds of the education courses they are now teaching and would allow their professors to spend one-third of their time teaching, one-third researching, and one-third working with teachers in the public schools to develop better programs, the possibilities for developing new concepts in education could almost become limitless.

In successfully undertaking change, we know that we must involve the local and national agencies and that they must work together. Further, we must start now without money and then search for funds. We need creative ideas, and then we need to seek money. Each staff can start now if it is truly committed to the notion that schools must improve. We don't need money, we don't need better buildings, we don't need a trained staff. Yes, all of these are important, and ultimately we hope to have higher salaries, and more money for materials and improvements; eventually improvement means dramatic change. In the meantime we must take what we have and begin to move rapidly in the direction of better schools.

Everything that has been indicated in this book is possible. There are in the United States now many educators who have had personal experiences with all of the philosophies and programs and guidelines expressed. Many have worked with each of the 63 revisions; many have helped implement all of them in the schools. They are possible; they do work; and they can help create better schools.

As of yet, though, we have not developed the kind of school we need and are capable of producing now. People committed to these ideas, and with notions of how they can be developed, never get together with a complete staff dedicated to the same goals, and/or we never stay long enough in one spot to develop all of these ideas in one school. But one of these days some innovator, not quite as restless as most, more content to take the time to stay and mold together these ideas, is going to put together all of the exciting potential in education; he is going to gather a staff, a building, and a community which will insist on this accomplishment. Some educators are starting, for they know it can be done; some educators know schools can be better, for they have helped to implement all of these changes; the philosophy expressed in this book works; a few schools are doing many of the gimmicks now. They do sell doughnuts every day; they do build a daily smorgasbord schedule; they do have optional attendance and an open campus; students do have a great deal of freedom; they are expected to make decisions and accept responsibility; they do often have their entire day completely "free"; they do not need to bring notes from home if they are absent; there are no study halls, or hall passes, or bells; they do have 3 and 4 year old programs and all day 5 year old programs; they do have Pre-K through 12 closely interwoven, sharing the same facilities under the same roof; they do have elementary industrial arts and trained physical educators working with the pre-kindergarten children; they do have personalized programs and have eliminated report cards, even in high school; they do let students plan and direct their own classes; they have eliminated the old standard requirements of English, history, math, and science; they do let students out of the building, sending them, for example, to Mexico for several weeks; they have individualized instruction; they do some diagnosis and prescription; they use parent volunteers; they have a twelve month school; they have eliminated traditional counseling programs and discipline procedures; they have changed facilities; they have changed curriculum; they have a different philosophy about learning and the learner.

But they are just in the beginning stages of all these and other even more important changes. And, unfortunately, many change agents do not stay long enough to complete the job; further, before the school is completely achieved, the better staff move on to greener pastures. It has happened to most of the innovative schools; they have stopped innovating; new ones begin and the cycle repeats. This has been the experience of most innovations in the 60's.

But somewhere soon in America, someone will put together for the 70's the school described in this book; it can be any creative teacher; schools can change if they have those magic ingredients: commitment, philosophy, hard work, creativeness, extra leadership, clerical and custodial help, and teacher aides. If they don't have all the ingredients now, they should not wait. They should start with what they have, then search for what is missing.

In this effort to change, if at all possible, it is true that it is helpful if some "risk" money can be set aside. Do not put every penny into salaries, buses, repairs, and new materials. In almost every change school, we have found the need to knock out a wall or buy a particular piece of equipment, or hire a teacher aide in the middle of the year. Sometimes these have proven to be short range mistakes, but in the long range view they have proven to be of great value. With each mistake we have learned: we need to have a few dollars with which to experiment without being called on the carpet or placing the district in debt.

Change involves some crystal ball judgments, and, unfortunately, we are not always right. We do our best, but educational decisions at the moment are not infallible; fortunately, most of the time we are right; taxpayers must accept the possibility of mistakes and evaluate performance on the percentage of "sound decisions," not on 100 per cent perfection. Remember, one Appollo caught fire before we finally got to the moon. Education must realize the same element of risk, and must provide a few dollars in contingency to correct errors. But with patience, understanding, and confidence we can overcome the obstacles facing education today.

As we close then, we can conclude that schools really designed for boys and girls are no longer mirages on the horizon, but a potential reality; each student will be able to find success in a program designed to truly meet individual differences, needs, interests, and abilities; these are no longer cliches in the textbook. As we reflect on all the things we have said throughout these pages, many of which have been repeated purposely for impact--a plea for massive reform--we must remember that we are not talking about theory, or about something that may not occur until the year 2000. We are talking about something that is practical and necessary, and something that can be accomplished in the 1970's.

If we do all the things suggested in this book, we can have schools in the United States which are significantly different and significantly better.

THE APPENDICES

chapter i

summary of and commitment to change

The past ten years has seen a growing commitment to change in American schools; the author has been fortunate during this period to be deeply involved in the implementation efforts of school staffs who have truly attempted to put theory into practice, several of whom have moved at an amazing rate of speed. The past several years have presented opportunities to travel throughout the United States to visit schools, give speeches, and serve as a consultant in thirty-one states and provinces of the United States and Canada, as well as to contribute articles in national journals regarding the changing American educational scene.

This book has been a summary of the knowledge gained through these ten years of changing schools--as a teacher, principal, superintendent, speaker, and director of and consultant for innovation, both locally and nationally. Because we are moving at a relatively slow pace in revising schools, the decision was made to try in this book to express as enthusiastically as possible on paper, WHY schools must change, WHAT changes must be made, and HOW they might best be accomplished. Unfortunately, it was not possible to include many illustrative visuals which might have helped to explain a number of the comments.

Further, in this manuscript no attempt was made to spell out line by line how a specific school was changed; nor has there been an effort to spell out line by line such topics as "Exactly How to Build a Daily Schedule." The actual step-by-step procedures vary from school to school, are primarily mechanical, and can be easily learned by creative members of the staff. For not spelling out in such step-by-step detail each of the 63 or more revisions under way in education, some have criticized this effort as just another theoretical book. This is far from the truth; remember this has been an effort to talk about change by one who has been on the firing line of change--in the public schools--the past ten years--and who prior to the past ten years worked in conventional schools, thus providing some subjective measure of comparison.

One of the biggest obstacles to changing a school is lack of a real commitment to an innovation philosophy. This statement is not theoretical; many teachers and administrators get impatient when change is discussed, because they want to know how--they don't want "the philosophy." But usually these educators soon are lost; they do not make the effort to really understand the rationale for a change, and thus quickly say "we couldn't do that here," or "we must move more slowly." Before any change can be successful, there must be commitment; thus part of this book has stressed the WHY of change. Once educators understand the WHY, they can turn to WHAT changes should be made; after that, they are ready to study the HOW of change.

Hopefully this book is all practical and not theoretical. Hopefully it has the proper balance or blend of the WHY, WHAT, and HOW. If the reader will consider carefully all of the materials presented in the various chapters, the parts will fit into a whole. There has been a very definite attempt to describe how to change individual schools. It is specific; the ideas which are presented are applicable to all schools: elementary, middle, and high.

Until this date, for whatever value they might be, there has not been time to summarize in a book the convictions of the author's personal experiences in changing schools; unfortunately, those teachers and administrators who are now meeting the day-to-day problems which develop when starting massive new programs usually do not have time to write. Some of the most valuable "how to do it" materials are not on the market today simply because those on the firing line do not have publication time and outlets. Dr. Jim Jester, for example, at Southwest Missouri State College laboratory school has contributed a number of insights in this book, but has not had time to write.

Most of the books on change currently available in the bookstores have been written by college professors who are not now on the daily school production line, or by principals who developed one program, wrote about it, and then went on to other pastures, such as superintendencies, consultantships, college teaching, or private foundations. Very few of the original grass roots "change agents"--those principals, for example, who started a school in the direction of innovation five or ten years ago, are still directing a public school. They have left the implementation of innovations to those who followed them.

As a result, most of the so-called innovative schools of today are merely replicating patterns developed by the early innovators five to ten years ago. A specific example is the switch to modular scheduling. The type of plan which Stanford University and Marshall High in Portland started several years ago is not new, nor is it the latest, nor necessarily the best. Individualized learning and smorgasbord scheduling offer much greater promise. But all over America, schools are just now adopting modular scheduling as "new." Speeches given several years ago on large group and small group methodology, open labs, unscheduled time, independent study, and open pod facilities are no longer new. In fact, in many communities those speeches are far out of date; but, unfortunately, they are still valid and being used by many of the present schools to explain their programs to those visitors who are yet operating traditional programs.

The Nova, Marshall, Ridgewood, Walker, Meadowbrook, Granada, Melbourne, Brookhurst, Abington, Evanston, Ferris, Fox Lane, Roy, Lakeview, University City, Thomas, Oakleaf, Matzke, and all the other pioneer schools--the early, exciting attempts to change American education--as good as they were or might still be, are already obsolete. These types of schools and their teachers and students were real pioneers. They showed that we could change schools; they did not prove they were better schools, but they did prove we could develop different, alternative ways of educating boys and girls. And their efforts will not be lost; they provided the breakthrough to enable eventual development of schools which will be truly significantly better. But these are not the kinds of schools we should be developing now. We ought to be able to build upon their experiences and go far beyond. We need some new types of Nova's--some new pioneers--to show that though many of the ideas developed in the original staff utilization schools are still applicable, they are now only stepping stones to what must come soon.

Listen to the early school leaders in the present change movement; listen to J. Lloyd Trump, Dwight Allen, John Goodlad, Madeline Hunter, Eugene Howard, Bob Dunsheath, Gardner Swensen, Bettina King, Harold Gores, Evelyn Carswell, Ann Grooms, Arthur Wolfe, and, and, and,--they are not saying the same things they did five years ago--yet school administrators are acting as if they were by accepting only the changes which were developed then. In 1968-69 most schools adopted 1963 programs, when the focus should be on the new developments coming in the 70's. Certainly the psychologists, sociologists, and other observers of the current educational scene are not advocating the 1960 model.

Look at the research currently being published. Review efforts of Title I, II, III, IV, and V of ESEA, and see what has occurred to date. Look what psychologists and sociologists are saying. Popular magazines are helping change by using the ideas developed by many of the leaders on the firing line, but who unfortunately were not heard under their own bylines because they lacked a publication outlet. Fortunately for education these lay writers are finally talking about the year 2000. Most of the books recently published on how to innovate, and this one, are threatened with obsolescence. As more schools begin to switch, as we implement the ideas of the 70's, the current literature will be badly in need of revision.

Why then another book on how to change a school in the 60's? The reasons are twofold: first, only 30 per cent of the schools have in some way moved into the innovation stage, and most of those are just in the fringe stages. Probably only 15 per cent of this 30 per cent are really deeply and significantly involved in change. Another 40 per cent are talking about some changes; they are becoming aware of the need, but are sitting on the fence. The other 30 per cent are still resisting change--they are content with the status quo. The second reason for this book is the great disappointment in the results of so-called innovative schools--the results found in the 15-30 per cent who have a reputation for new programs.

As educators have an opportunity to travel in America, many are immediately both encouraged and discouraged. They are encouraged by the evidences of the growing commitment in 30 per cent of the schools to at least try some new ideas. More schools are adopting modular scheduling, even though it is in a form soon to be replaced by daily smorgasbord and daily computer scheduling. More schools are building open classrooms, providing large and small group areas, purchasing acoustical flooring, developing huge resource centers, adopting independent study, team teaching, non-grading, teacher aides, and new curriculum materials.

Unfortunately, in most of these schools, in spite of the adoption of some mechanical and curricular changes, Johnny and Mary are not getting a much better education, or at least there is little evidence of it. There really seems to have been little impact at the classroom level. Group-paced instruction is still prevalent; students still get D's and F's; we still have the problem of the in-school dropout; the ghetto and rural schools still are reminders of failures; the suburban schools, snug in their middle class A and B college oriented values, still are resistant; when one looks at individual children, and individual teachers, and individual classrooms, unfortunately, one finds that in only a small percentage of the situations has there really been a significant improvement. But, it has occurred in some classrooms. The challenge now is how to draw it all together.

Fortunately, the few rooms in America where this exciting improvement has really taken place have provided America with a growing cadre of educators committed to the idea that schools can and must improve or cease to exist. Further, this cadre is learning how to make changes. The task now facing educators is to decide what changes really are an improvement, and then answer how we can best implement them. We must stop experimenting with those innovations of the past ten years, and move ahead to those beckoning in the 70's. The refinement of the new adoptions of the 60's will come as we interweave them with those of the 70's.

As stated, one purpose of this book is to bring together the author's experiences in changing schools the past ten years to show that it can be done. In Spain, Taiwan, and Haiti we had to innovate to survive. The existing conditions were such that one could not run a traditional school. For example, in Haiti we were forced to run school for everyone, K-12, from 7:30 a.m. to 12:30 p.m.--a total five hour day. Forty-five minutes of this time had to be instruction in French. The whole concept about the length of the school, and the time needed for each class or subject changed dramatically as a result of forced innovation.

In Arizona we developed one of the first daily flexible schedules in America. It was in successful operation before the Stanford schedule was marketed. Students ate doughnuts and had a great deal of freedom. This experience led to a position as a full time consultant for innovation in the University City Schools, a suburb of St. Louis. It was probably the only position in American public schools at that time with no other responsibility than to help speed up the process of change in the 13 elementary and secondary schools.

The next position in change was the wonderful opportunity to move from a big city suburbia to a neglected rural state. The challenge was there--to see if the same ideas and notions would work in a conservative state beset by financial problems, and previously isolated from the mainstream of educational development. There, working in cooperation with the staff of the Lake Region Educational Planning Center, with a tremendous array of national consultant talent, with the local educators in that region, with State Superintendent of Public Instruction, and with the State University at Brookings, contributions were made to the development of new concepts in innovation in South Dakota. It was quickly ascertained that all of the new notions in education were applicable to rural states; only methods of implementation had to be altered.

As this book is written in 1969, we are in the midst of the challenge of helping to change a good conventional college laboratory school, PreK-12, into a good innovative one. It was difficult to give up a full time consultantship, but some educators must work at the daily nuts and bolts implementation level. A few schools in America must be looking toward education in the 70's and 80's. The challenge afforded as Director at the Mankato State College Wilson Campus School in 1968-69 was to do just that--put together all the exciting innovations of the 60's, and then attempt to be one of the first to implement the innovations of the 70's.

For the 15-30 per cent of the schools who have undertaken some phase of innovation, this writing will hopefully encourage them to go beyond. None of the schools visited are the kinds of schools we could have. Thus even the forward looking schools must rapidly revise what they are doing. The 40 per cent who are considering change should find WHYS, WHATS, and HOWS of special value. The 30 per cent who have resisted change hopefully will find this another challenge to their thinking.

The basic part of this book was organized into chapters built around eight steps that can be followed as one method of changing a school. In each of the eight chapters, illustrations were given as to how to implement specific change in each of the six components of a school. These eight steps and six components were discussed in general and in detail. If a school does not complete this or another type cycle of eight (or ten or six or twelve) steps in relation to changing all six (more or less) components, and then if it does not proceed through the cycle again, and again, the potential of becoming a better school is decreased. Recycling is one of the keys to successful innovation.

As a summary to all the comments in this book, several of the remaining appendices attempt to list some people, schools, projects, and books which should be of some value. Most of these lists will be out of date by the time the reader explores them, but they should provide a background for those new to the field of change of some of the things which have occurred in education in the past ten years. This brief historical glance should let the reader know of the great amount of energy already expended trying to change schools; the need now is for more "change agents" to help speed up the process of developing improved schools. Commitment is needed at the local school level all over America.

chapter ii

outsiders' views of Wilson

Here are reprints of some of the recent articles about the Wilson School as seen by news reporters. This is not to say that Wilson is "the answer." It is only to indicate that there are schools like Wilson all over the United States trying to find a "better answer." Further, these reprints hopefully will indicate that this book is not theory but practical application, and from view points of those other than the author. The important message here is that America needs pioneers--apollos--educators who will take some schools to the cutting edge in an attempt to help the educational ills of the nation.

"Nothing is Too 'Far Out' to be Tried in the Wilson School"

By John Morton

The National Observer

At the Wilson School in Mankato, a high-school student spent the first two months of his junior year in the student center drinking pop, playing cards, and listening to rock music on the juke box.

He could have attended classes in science, English, and history just down the hall. But it is the policy of Wilson School not to force a student into anything. Indeed, he even has the option on a given day of not coming to school at all.

There is no dress code--some youngsters come to school barefoot--no report cards, and none of the traditional grouping into grades according to age. Students from 3 to 18 share the same building and some of the same classes. Individual programs of study are decided on by the students themselves; they also help design most of the courses. With attendance optional, a teacher who fails to attract students may be asked to look for work elsewhere.

'It's Different'--This may sound like student power and permissiveness run wild, but some of what occurs at Wilson School may be a harbinger of education's future. Run by Mankato State College as a laboratory school, Wilson probably is the most innovative publicly supported school in the country.

The man behind Wilson School is Donald E. Glines, one of the country's foremost apostles of educational innovation, who was hired a year ago with a few restraints. "I will not say Wilson School is better than a traditional one," says Dr. Glines. "I am just saying it is different. We are trying to find something better. We can do that only by trying something different."

Wilson School's reputation has grown and is sure to grow more during the coming year when teachers, school board members, and administrators from around the country are permitted to study it in large numbers for the first time.

There are other experimental schools, of course. Almost every state boasts at least a handful of public schools trying out new programs of some kind. The Nova School near Fort Lauderdale, Florida, for example, a pioneer in innovation, is ungraded from grades one through twelve and soon will open an elementary school housing 700 pupils in one room.

The Matzke School in a Houston suburb is using a building without interior walls for its team-teaching approach. Marshall High School in Portland, Oregon, uses a flexible schedule that includes classes of varying size, duration, and intensity. Schools in University City, Missouri, a St. Louis suburb, have variable daily schedules and give students considerable freedom and responsibility.

Most such schools, however, try from one to a half dozen new concepts; the Wilson School is trying to pull together all manner of innovations in one place. Ideas rollick around among administrators, faculty, and students so rapidly that no single month's education program is exactly like another's. The philosophical ground shifts so fast that a formal statement of it mimeographed in May was out of date by July.

The 600 students, drawn from Mankato families on a volunteer basis, don't enroll or register at Wilson--they "shop around" for three or four weeks to see which teachers and fields of study they like. The teachers will suggest programs they think the students might like, and the students add their own ideas.

If nothing the teacher suggests suits a particular student, something special will be worked out for him. A student also can devise with a teacher one or more of three or four weeks' duration "mini-courses" in a particular field, for example, minority rights or major themes of the poetry in rock songs.

"The teachers act as consultants, guides, motivators," says Dr. Glines. "They advise, they suggest, but they do not force unless it comes down to the same sort of situation a doctor faces when he has a patient who will die within the hour if he does not do something."

Even this final veto is not exercised during the high-school years. Dr. Glines is fond of saying that a high-school student at Wilson can take nothing but basket weaving, if he insists, and still graduate. But the youngster is kept advised of the limitations this kind of program will impose on employment or acceptance at college.

After four weeks of "shopping," a student is supposed to tell what he has decided to study.

A Time of Less Freedom--Students in lower grades have less freedom. Those in the preschool program and in what would be kindergarten and the first grade in a traditional graded school follow curriculums which teachers help decide, based on individual evaluation. These youngsters, however, still are turned loose to select courses on a daily basis and associate with older students.

Pupils decide on their own what they want to take; however, teachers reserve a veto power. A "second grader," for example, will be required to take remedial reading if he needs it, even if he does not want to. Similarly, if he lacks gross or fine motor development, he might be forced to take physical education or industrial arts. Offering industrial arts in primary grades is itself an innovation.

These younger students earn "responsibility hours" in which they can study on their own, visit other classes, go to the student center or just roam the halls. "In the school I use to go to you had to stay in one room all the time," confides Leo Bosard, a fourth grader, as if describing the deprivations of reform school. "Here you get to move around a lot and go different places."

To Dr. Glines and his staff, this mix and movement among young and old is an innovation that gives younger students someone to admire and promotes tolerance and helpfulness in the older ones.

A Generation Gap--Not all of the older students seem pleased, however. "There is too much of a generation gap," says Tammy Ollrich, a senior. And Bob Een, a junior, complains: "In their responsibility period they are supposed to be studying, but instead they are running up and down the halls, jumping on the furniture, playing cowboys and Indians --'Pow! Pow! Pow!"'

How well do students do at Wilson? The program is only a year old and the real measure will come as Wilson graduates attend college. Several already have taken college-level courses at Mankato State as part of their high-school work and have done well.

Some students, randomly sampled, say that once they became used to responsibility, they learned at least as well and probably better than they could have in a traditional school. None of them would welcome a return to a traditional system, citing the excitement and challenge of experimentation and freedom. "It works out about the same," says one. "Those who goof off here would goof off in a traditional school."

Mrs. Jo Lawson, an English teacher, had been fearful that the broad middle band of average students might suffer without the "push" of a traditional, structured program. "So I concentrated on them for a while," she says. "They just middled along, about the way they would in a traditional system."

No One is Failing--The significant thing about Wilson School's students, says Dr. Glines, is that none of them is failing, only achieving educational goals at different speeds. "How can you fail a child in the third grade?" asks Dr. Glines. "It's incredible! The teacher has failed, not the child--99.9 percent of the problems are caused by the teachers and the schools."

Starting this summer, Wilson is operating on a 12-month school year. A student can decide to go to school in August, skip September, come back in October, or whichever other arrangement suits him and his parents. "What's so magic about going to school in January?" asks Dr. Glines. "Kids can learn just as well in August."

Having students drift in and out in this fashion would pose problems for traditionally operated schools. So would optional attendance, since a student could hardly keep up with a class marching forward together with regular attendance and allotments of study.

Such traditional classroom practices provoke a tone of disbelief in Dr. Glines' voice. "All over America you can walk into a classroom and see 25 kids on the same page, working on the same problem, as if all 25 had the same abilities, same interests, and the same goals. Whenever a school claims it's paying attention to individual differences, it is usually hogwash."

Dr. Glines often compares the typical American public-school education to a hypothetical situation in which a physician prescribes flu shots for all 25 patients waiting in his office, even though they might suffer from heart disease, ulcers, and a variety of other afflictions.

He preaches flexibility, and Wilson School reflects his beliefs. Thus, erratic attendance of students poses no problems. Each student is permitted to progress at his own speed to the limit of his abilities and interest.

Each day's schedule is devised and posted the previous afternoon, which gives students a chance to think about what they want to do next. Seminars are common, but formal classroom situations are scheduled only when a teacher has a specific reason for wanting all of his students together. It happens rarely.

A student completes a course whenever the teacher and he agree that he has achieved the goal he has set for himself. This provides maximum flexibility--for the student who can finish a typical 36-week chemistry course in six weeks, as well as the one who needs 45 weeks. As for transferring credits and grades to colleges, almost all college-admissions counselors queried have agreed to accept the teachers' subjective evaluations of a student.

"The great majority of high-school students will complete their studies in four years," says Dr. Glines. "But there will be some who will do it in three and others who will take five."

As for the lad who spent the first two months of his junior year dealing cards, he soon was beset by nagging fears about never getting out of high school. So he began to study.

"I am still a quarter behind," he says, "but I am going to school this summer to catch up."

"Wilson Goes to 12-Month School Year"

By Lowell Schreyer

Mankato Free Press

School boards sometimes talk about the 12-month school year. The public often eyes it as a way of getting more out of its school construction dollar, but still the nine-to-ten month school year continues, except at Wilson Campus School, which will initiate the much-discussed but seldom-tried 12-month school year this coming term. Wilson will be open around the year except for a two-week Christmas vacation, one-week spring break and a two-week fall break.

"There is absolutely no reason for having schools open only from September to June," said Dr. Donald E. Glines, director of the school.

Glines pointed out there is no research to indicate that children cannot learn in summer. The growth of summer school programs has been showing it can be done. In addition, some occupations are geared to summer employment and the only time feasible for a family vacation may be winter.

The whole thing ties in with Wilson's emphasis on personalized programs as each student moves forward at his own pace. "You want the student to be able to progress at his own rate of growth, as fast or as slow as the student needs," Dr. Glines said. "As they go through, they do not have to wait for anybody to catch up."

This individualizing of programs is ideal for the 12-month school concept. Glines does not care when students take their vacations--summer, winter, fall or spring. It is all the same to him. "When kids come back, they pick right up where they left off. If dad wants to take the kids duck hunting, great! We encourage it. There is not enough of this."

Wilson Campus School, which gained a national reputation as an education idea mill in only one year, will also be concentrating on quality, instead of quantity this coming year, according to Glines. The quantity in the past year has been in the innovations put into motion as the laboratory school was revamped from an essentially traditional school to what The National Observer termed as probably "the most innovative publicly supported school in the country."

"The first year the emphasis was on developing a different school," said Glines. "The second year it will be on developing a better school." Not that there will not be more innovations in addition to the 12-month year. For one thing, there will be "smorgasbord" choice for students to design their own programs. Old curriculum materials will be discarded in most major areas and new materials brought in.

A lot has happened to the 580-student school during Glines' first year there. "It was traditional, egg crating, last July," he said. "You look at it now, and it is entirely different."

As during the past school year, school bells will be out. So will be grade designation, required attendance and grades. The famous doughnuts will be in. School will be open for instruction from 7:30 a.m. to 5:30 p.m. Students will not be required to be there those hours. Optional group classes will be offered from 9:30 a.m. to 2:30 p.m., and the rest of the time will be available for lab work and counseling. "Students can look it over and decide, 'What do I want today? How much cake? How much meat?" explained Glines.

Wilson students, incidentally, are on their own some 85 percent of the time and in class meetings the rest of the time. Glines sees no need of calling a group meeting unless some students have a common interest they want to discuss. "They can read and go to the resource center on their own," he said. A few students last year never went to a class, but they still learned by meeting with teachers periodically while working on individual projects.

The Wilson system does not leave students as free of adult supervision as it might at first appear. Some direction comes in the form of guidance from teacher-counselors which the students select themselves. Students also take tests periodically--but not for grades, only to let them know if they are ready to go on to new material. Individual conferences indicate to students and parents how the student is doing. Glines considers this of much more value than letter grades.

In the event a student appears to be skipping something he should have, the teacher-counselors point this out to him. "If this is obvious, then we will step in and say, 'You took seven courses, but you left one out,'" said Glines.

School authorities also have a veto power if a student is going too far off base in his course selection. "Last year we did not have to use it once. We hope we will not have to invoke it; but if there is an obvious lack, we will tell them.

In explaining the philosophical approach of Wilson school, Glines often uses the analogy that students, like patients in a doctor's office, should have individual diagnosis prescription. The trouble with education in the United States today is group prescription," he said. "The first 30 patients that walk in get flu shots. The tragedy is you have not even met the student, but his program is already set." Wilson attempts to determine where each student is and prescribe on an individual basis from that point on, he added. Glines believes the traditional system perpetuates failure. He explained that one can predict with almost 100 percent accuracy that an entering seventh grader, for instance, who has made a poor academic showing throughout elementary school will have D's and F's again in the coming year. "These kids with problems should not have more reading and math," he said. "The real problem is the self image. If they like themselves and school--they need to take something they are interested in--then the whole attitude changes."

Under the self-selection policy at Wilson, such a student could decide to take only courses such as shop, art and physical education in which he does well. He could also choose classes where he gets along well with the teacher. On top of that, attendance is not compulsory. "There is no longer a discipline problem," said Glines. "If he gets mad at the teacher, he can leave."

"He finds success in school--he likes the teacher--he likes school. That is the turning point. The next year you can ask, 'Hey, Pete, don't you think you need some math?" said Glines.

Not too far from the oldtime country school in some ways, Wilson will drop all boundaries between various age levels. A student of sixth grade age may find himself sitting next to one of the first grade age students. "As long as he has an individual program, it does not make any difference," he said. "If you have a first grader, a fifth grader and a twelvth grader at home, do you make them eat at different tables? Kids help kids," Glines added. "If a young one gets stuck, the older ones help."

There will be more team teaching at Wilson this coming school year. "Where there is one teacher, it is okay if there is an obvious skill the kid needs," said Glines. "But what if a kid comes along and teacher does not know what is wrong or if she does know but does not have the skill to remedy it?"

Some children, he pointed out, need a "tender, loving care" teacher while others need the staccato type teacher--"Sit down and stop jumping around the room!" The youngster has a better chance to get the skills and matching personality from a teacher team rather than one teacher, according to Glines.

Curriculum changes will mean an overhaul in almost every core area to get materials with more relevance to today's youngsters. That means Tom, Dick, and Jane readers are out. "Kids do not balk at learning but at the irrelevant things we ask them to pursue," said Glines.

The youngsters at the lower end of the age range will have more opportunity to take industrial arts and home economics--almost unheard of at that level, related the wiry, exuberant educator who sometimes skips along as he describes kindergarten children.

An overseas program may also be in store for Wilson this coming year. The school has been contacted about the possibility of entering into an exchange program with Spain. Wilson students already have background in a Spanish-speaking country through its exchange program with Mexico.

Physical changes coming up at Wilson include some non-traditional paint schemes. "We're going to wild colors," Glines said. "We do not like walls so we are trying to camouflage them." Glines is an "anti-wall" man and is presently punching holes in a few at Wilson. Space needs change from year to year, Glines explained. That is why he feels a school interior should never be limited to how the area is divided up. "Folding doors are a waste of time," he said. "Then you have a traditional classroom."

Glines is often criticized but never ignored for his forward looking ideas. He has been called in as a consultant to school systems in and out of state and has just returned from an advice-giving trip to Fort Lauderdale, Florida, which is putting up a large building, hollow as a barn for 1,200 middle school students. In October, he makes a similar jaunt to Fresno, California.

Visitors have come to Wilson from as far as both coasts. Of 50 Minnesota districts that looked at the Wilson program 30 percent are anxious to start it, 40 percent are not sure, and 30 percent "think it is awful." In Minnesota, Bloomington is trying the most Wilson-type program. Other suburban districts piloting some Wilson ideas are Burnsville, Hopkins, Minnetonka, and White Bear.

Glines favors a more pleasant atmosphere in a classroom. One elementary room at Wilson has carpeting and pillows in one corner for a reading area. One-third of the school will be carpeted this coming year. "Carpeting deadens sound," he said. "Where does all the noise come from?

the floor. School boards put in acoustical ceilings, so why not acoustical floors? Kids also like to lie on the floor when they study," he continued. "Look at the home. You do not sit in the most uncomfortable chair when you want to read a book."

His hand gave a wave of disgust at a rigid row of still-looking desks in another room. "I would get rid of them if I could, but who would take them?"

Looking back at his first year at Wilson, Glines reported that although children had the opportunity to take only so-called "snap" courses, more took English and social studies than ever before. Some took as many as nine courses rather than the usual five. There were also fewer discipline problems.

"On the negative side," said Dr. Glines, "we still have some kids that are turned off. In a traditional system they would have gotten F's. There were some kids that did nothing but drink cokes and visit. They may have improved socially."

While results of the Wilson system cannot be evaluated fully after only one year, Glines believes his youngsters are doing at least as well as they would in an academic school. Some high school level students have even been taking college work at the parent Mankato State College. He has never claimed Wilson was better, only different.

Glines also thinks Wilson is fulfilling its laboratory school role of innovation, experimentation, research and evaluation--in short, exploring.

"A New System of Learning"

by Sharon Terhaar
Glenwood Tribune

Mankato State College has developed a new schooling system for high school students. Wilson school has perhaps the most advanced curriculum of any school in the United States. It is an experimental school aimed at improving our present school system by allowing the student to learn at his own pace.

Large classrooms are done away with. Teacher to student ratio is one-to-one, and teachers work with the students individually. Age is no factor. Students of all ages may work in the same room at the same project. There are no grades, no report cards, and no failings. Students work and advance at their own pace. A student can pass on basket weaving and spend the rest of his day in the lounge. Nearly total responsibility is placed upon the student. He is the one who decides what subjects and how many he will take. No assignments are given. The student decides what he is going to do.

Emphasis is not upon grades, but on how much a student learns. Time is of no essence. Students do what they want to do, when they want to do it. There is no dress code and no mandatory attendance. Those who attend Wilson school are there by their own choosing. This form of liberal education brings out the individual talents and personality of each and every student.

The administrators of Wilson school feel that this is the best method of teaching. They would not go back to the old system.

In our school system students are required to attend classes. They are given assignments that must be done. Often a student does the assignment with little or no interest or effort. He looks upon it as merely something that must be done. When a student chooses what he is going to do and does it at his own pace, he is likely to put more effort into his work and take more satisfaction in it.

Sure, some students are going to "sluff off" in this type of curriculum, but what do you think they are doing in our present curriculum?

We are advancing toward a better system of learning, and it is very possible that the next generation will be taught by this form of liberal education.

"Wilson Provides 'Smorgasbord Scheduling'"

by Joan Gertner

Mankato State Reporter

"Most schools now are dull and unexciting," says Dr. Glines, principal of Wilson Campus School, who has developed "smorgasbord scheduling." Dr. Glines came to Wilson Campus in 1968 and is trying to develop a different school. He feels that if schools are to be significantly better, they must be significantly different.

Glines compares the traditional school to a doctor who diagnoses the cause and prescribes the same treatment for all 25 patients, regardless of their individual problems.

"We are putting monkeys, boa constrictors, and plants in the school," said Glines. "These are the things that are exciting--not books and teachers."

Many changes have taken place at the Campus School this year. There is no such thing as a report card. Students going on to college do not have any grades to send to the registrar's office. One or two parent conferences evaluations are scheduled each year, and parents may come in to talk to teachers anytime.

The traditional dress code was abolished at Wilson. A student may wear shorts and come to school barefooted if he wishes. Mr. Erikson, assistant to Dr. Glines, said that long hair is seen, and one student even came with a beard; but the administration has not sent anyone home because of their dress. In some cases, the students applied pressure to those they felt wore unacceptable dress.

Students have access to a lounge area and may go there to purchase coffee and doughnuts. A student is responsible for managing of the snack bar. This is one of the places where parent volunteers work.

Bells do not ring because there is not a specific length of time for classes. Students may stay in a room as long as they wish or leave whenever they want to. Students are not even to remain in school for a definite number of hours. If a student decides to go home at 10 a.m., he is free to do so. He does not have to come in the morning at all if he does not care to, and the office will not call his home either.

Parents calling the school in an attempt to reach their child are told, "Do not ask us where he is, we do not know."

Glines is a firm supporter of early childhood education. He believes that more money should be spent during the first three years of education than during other years, since by the time a child is eight he has 50 percent of his total knowledge. The Wilson early childhood program started with three-year-old children and included five male teachers. Glines said that there should be one adult to every ten pre school children.

Kindergarten children are exposed to all subject areas right away. They move around to the science room, industrial arts room, and music room just as other students do.

Wilson is ungraded and students are divided into the lower and upper school, rather than specific grades. Very few classes are required, and a student selects his own schedule. In the morning he looks at the schedule and then takes what he is interested in. Even kindergarten pupils do not stay in one place all day. They have color-coded schedules. Yellow means music; pink means Spanish. The administration of Wilson believes that unless a student is given a choice, he really does not have the opportunity to develop responsibility.

Glines contends that art, music, and physical education are just as important as science and social studies. In a classroom it is not uncommon to find students of all ages working at the same time.

A teacher is not assured of a class at all. If he does not have students coming into his room, he may assume that he is not an interesting teacher and had better try to improve the situation.

Students have the opportunity to select their own homeroom teacher. One homeroom will contain a wide range of ages.

Graduation requirements include earning 12 credit units. At Wilson a student may complete this at age fifteen or even age nineteen.

In the past registration at Wilson has been by application. In the fall of 1968, Dr. Glines opened registration to anyone. Because of the new program, he expected that many students would transfer. Instead, so few left that the school is over-crowded; and new students are not being accepted this fall.

A Wilson senior said, "I really love it here. For the past ten years I was in a Catholic academy where everything was so rigid. It is nice to be able to take classes that you are interested in instead of having classes you hate. The system is not for everyone because there are some kids who will take advantage of everything."

Another student said she likes it because she was able to work at her own speed. A student teacher at Wilson admitted that there were some students who cannot contend with so much freedom, but he liked the idea of having labs open so that students could come and go whenever they wished.

Students have reacted so favorably that the student council has requested that the school remain open more hours during the next school year.

"Pupil is His Own Boss at 'Laboratory' School"

By Catherine Watson

Minneapolis Tribune

Wilson Campus School looks like any regular school: the classrooms with the regulation 25 desks are there; the teachers are there; the textbooks and the Bunsen burners and the white mice are there. There the similarity ends.

At Wilson, the child's education is left almost entirely up to the child. There are no grades, dress code, or graduation requirements. Attendance is optional. Everyone from seniors on down to the three-year-olds in the early childhood program is free to attend what he wants, when and if he wants to.

Teachers do not hold regular classes. instead they encourage students to work on projects on their own. ("It means 28 lesson plans a day instead of one" one teacher said, "and you cannot use the same lecture notes for 30 years.") Tests are kept on open shelves for students to take when they are ready. They do not have to turn them in.

In short, tradition is out at Wilson and has been since July, 1968, when Don Glines took over as director.

The new freedom and responsibility Glines is giving Wilson students means they come to school only because they want to. And attendance, Glines said, is "higher than normal." Only four of the school's 600 students have transferred out.

The school's revolutionary format also leads to eager questions like this one shouted by a small boy as he and two companions burst into Wilson's cluttered art room: "Mr. Evans, can we work?"

Some teachers in traditional schools never hear that kind of enthusiasm; but Glines estimates, "We will reach about 95 percent of our students by the end of two years. They will get involved, committed; they will come to school, figure school is a good place to be. Now about 25 percent are not involved." The traditional school, however, only reaches or motivates about 30 percent of the students, he commented.

"The A-plus students are already going by themselves, and you have not reached the D or F students, or many of the C students--the in-school dropouts. They will graduate, eventually; but they are not turned on to anything." The whole point of Wilson School is to turn students on to something. It does not seem to matter what.

"We tell our students we do not have any requirements here," Glines said. "For those who are interested in college, we say, 'these are the requirements most colleges have,' and let the students pick them up."

Wilson is run by Mankato State College as an experimental laboratory school for the State Department of Education. Until Glines arrived, however, it was as traditional as the rest of the state. Now at Wilson the students run free.

From early grades on, they choose the courses they want and the projects they want to work on. Teachers are guides for them in what Glines calls "the student quest," and the students make appointments for teacher conferences when they feel they need to. Formal classes have all but disappeared.

While those three small boys were experimenting in the art room one day last week, other clusters of students were building a model house; a fourth-grade girl was doing math problems all by herself in a sunny classroom; foursomes of teen-agers were playing cards or chatting in the student lounge; one boy was sleeping on a couch in the front hall; five boys were playing with white mice and a boa constrictor in the biology room, and batches of three-year-olds were wandering everywhere. "In a traditional school, you can shoot a cannon down the halls during class time and not hit anyone," Glines said. "Those schools are run like jails."

Wilson is trying out over 60 "innovations"; they are really deviations from the traditional. "We cannot prove they will work," he said, "but you cannot prove they will not." Glines has worked with many schools around the country and came to Wilson from South Dakota where he designed and set up experimental programs.

The most striking new programs at Wilson are:

> Early Childhood Education -- Half-day sessions for three- and four-year-olds and full-day kindergarten classes. The little children study reading, Spanish, and industrial arts ("Almost nonexistent in Minnesota elementary schools," Glines said.) -- with much emphasis on physical coordination. "We are stressing early childhood programs for every district in the state," he said. "The most important years for a child are from age three to seven."
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> Immersion Spanish -- A program which lets students study Spanish for two or three hours every day and has sent 30 students from fifth through twelvth grades to Mexico this quarter for a total immersion in Spanish language and culture. "We feel the more you are in school, the less you learn," Glines said. "And you cannot learn Spanish in Mankato, Minnesota."
>
> The learning task -- Emphasis on the student as learner, which forces teachers into more individual instruction.
>
> Individual Diagnosis and Prescription -- "A doctor would not prescribe the same thing for 25 patients without learning about each one," Glines said. "But in a traditional school, that is exactly what happens."

Student Freedom -- "There are some who cannot handle it, abuse it--they need it the most. I do not know how else you teach responsibility," Glines said.

Daily Scheduling -- Teachers' schedules are changed daily. Since students must seek out teachers, their schedules change accordingly. "It never repeats," Glines said. That adds to the school's atmosphere of excitement.

Twelve-Month School Year -- "For the first time we will have a ten-week quarter this year," added Glines. "It does not matter whether you learn in August or December. Schools were originally closed in the summer so students could work in the fields, but it is not 1890 anymore. Our students will be able to go year-around if they want to." Students have adapted quickly to the new system, Glines and his teachers said.

"We're still missing some students," said Glenn Erikson, Glines' assistant. "But we were missing them last year. Only their bodies were present in class then; now they aren't."

Teachers also have adjusted quite well to a school where there are no bells, no notes from home, no tardinesses, no report cards--in short, where most of the things they were used to have been removed.

"We do not have all of the students going yet," said Mrs. Jo Lawson, who teaches what used to be high school English. "But every day we see more kids catching on to what they should be doing." Her classes are now changed, as are most teachers', to a seminar format. She likes it better this way.

Above all, the school is permitting the students to learn at their own speed. "Some of our first graders do not read at all because they are not ready," Glines said. On the other hand, "some older students do algebra in six weeks instead of the traditional 36 weeks."

Wilson is experimenting with programs that to other school districts are either dreams or threats. The goal is to be able to say "this program does not work--we tried it--do not waste your money" or "do this--we tried it, and it works," Glines said.

"Our slogan is, 'If schools are to be significantly better, they must be significantly different,'" Dr. Glines added. "The hangup for the other schools in the state is that they think they can make their present lockstep school better. Maybe they can--a little. But I said 'significantly.'"

chapter iii

an example of how to start

All subjects need revision, but physical education is in particular difficulty. For the past several years, educators have been debating whether required seventh grade general music or required seventh grade physical education was the worst taught subject in the schools. In the opinion of many, overall the seventh grade still is the poorest year for students, and required general music at that level is the worst single course. But unfortunately, physical education seems to be the poorest taught subject on a K-12 basis. For that reason a number of educators have been carrying on a running battle with the American Association of Health, Physical Education and Recreation and such former leading physical education schools as Springfield College.

During this period the author submitted five articles which were extremely critical of the physical education profession: Innovations, Lifelines of Physical Education; Our Overseas Challenge; Horse and Buggy or Space Age Physical Education; The Forward Look in Physical Education; A Pattern for Change in Health and Physical Education. As you might expect, only one was published and that was the one which was the least critical and probably the poorest of the group; further, nothing ever came of the ideas. Neither have any of the colleges responded to pleas for innovation in physical education.

Speeches have been given to physical education groups at national, state, and local meetings. There has been some impact at the elementary level, but generally acceptance of change in physical education has been painfully slow; it is just now that the sleeping giant is beginning to stir.

In this section the first effort is to briefly describe what is wrong in physical education; then an attempt is made to give some suggestions as to how to improve physical education programs, with emphasis on individualizing the approach. Most any subject could have been selected, but physical education serves as a good example of the type of searching which must precede any major change. Thus this chapter is a further effort to relate some of the dissatisfaction which must precede change, and then to point out some of the kinds of specific steps which can be implemented to achieve improvement.

The negative comments which follow are not intended to criticize the many excellent men who have worked so hard to improve physical education. A number of them have spent a lifetime in the field. Physical educators like Dr. H. Harrison Clarke and Dr. Arthur A. Esslinger of the University of Oregon and Dr. Joy Kistler, formerly of L.S.U., have devoted hours toward improving physical education; there could be a long list of other contributors. But in spite of all these hours and years of work by outstanding and dedicated individuals, physical education is still probably the poorest taught subject in the schools today. It has been the least well received as part of the school program and is fighting to stay in the curriculum in many states. A minority of those teaching physical education belong to the national professional organizations attempting to improve.

Unfortunately, most physical education programs are still utilizing the same 1930 vintage model that many individuals have experienced. Most students have had no elementary school physical education program; it has been taught by the "self-contained" teacher. In junior high, the physical educators have thrown out the ball, although junior high is the best of the poor physical education programs; in most schools students still play touch football, basketball, and softball for three years, with a little track and rhythmics thrown in. A minority of schools include gymnastics and wrestling and/or a few individual sports. The high school program has been controlled by athletics; most athletes have no physical education program because they participate in sports for three years. Athletics still control physical education in most public high schools.

There is another problem in physical education. There is no spark, no real clash of ideas. There have been many great individuals in the field. There are excellent traditional books in the field. But as of today, there is no dynamic leadership, and nationally there are very few excellent programs. Controversial leaders are needed, whether or not the majority agree with all their ideas. Change agents are needed--those who will argue and fuss and force an examination of the present gym class rituals. Education is changing; physical education must too, but someone must rise to give the spark. Physical educators need to argue more, and then act.

Physical education is still involved in a mechanical circle. There have been improvements in physical fitness in the past few years. This is wonderful--most educators are for improving physical fitness. But in spite of this improvement, there has not been developed a really challenging kind of physical education program. The profession continues to go around the same circle of problems.

Recently a national figure in physical education spoke about some of the deplorable conditions in physical education. This was fine; more physical education leaders need to point out present weaknesses in their own profession as a step toward the future. But, unfortunately, the man had given basically the same talk fifteen years earlier. What has been done in these fifteen years? Yes, physical education has improved, but not fast enough or far enough, and certainly not as much as other fields. We must speed up the process.

A further example is the disappointing report of physical education in the 1966 ASCD publication titled New Curriculum Developments. There seemed to be little that was new or significant in the field of physical education for that curriculum report. There is a lack of creative ideas; there is a lack of a fresh approach in physical education. There has been the President's Council, but it has had little effect thus far on moving physical education forward at the daily classroom level.

There is still an unfortunate participation attitude regarding physical activity. Many in America sit at a desk. We drive a car. We get involved in traffic jams. There are no facilities nearby in the neighborhood. To do pushups at home at night is a very lonely effort. Most have night meetings and fail to take time for physical education, even though we know we should.

What can we do about some of these problems in physical education? First of all, we need a National Dreamer's Conference. We need to get out on Cloud Nine. To the conference we should invite anthropologists, psychologists, philosophers, physicians, political scientists, sociologists, and health and physical education experts. We need to talk about what health and physical education and recreation should be like in 1970. We need to dream about what it might be like in the year 2000. We should put the best efforts and best thoughts into creating the kinds of exciting, dynamic, individualized physical education programs that we need throughout the United States.

A second thing that should occur is a new AAHPER--a new national association--an organization with teeth. The present AAHPER tries to compromise too many philosophies. The new organization should be more outspoken. Membership would increase because there would be involvement with exciting new ideas. AAHPER needs to lead out with new programs at the national level. There is a need to develop curriculum projects, to plan national summer institutes and to increase the amount of federal aid. Another direction should be to fuss at poor college programs. The majority of those institutions producing teachers are mediocre or below average in terms of good teacher-training programs; their graduates do not develop excellent programs. From the national level we could work to eliminate extra pay for coaches and put them on a 12-7 day instead, thus improving physical education programs. Coaches should not teach five physical education classes and then try to coach three hours. There is no way but to let the classes they teach suffer, regardless of whether they are assigned physical education, math, or any other subject responsibilities.

The AAHPER should hire new types of national leadership. They should hire needlers--real change agents. They should hire dreamers--people with creative, innovative new ideas. They should hire implementers--people good at seeing that things are accomplished. These three, as a start, could form a national team for innovation. Their team leadership would undertake major national projects.

One national project would involve six elementary schools, six junior highs, and six high schools chosen from around the United States. These eighteen schools would be picked because they are doing exciting things now, or are planning exciting innovations in physical education. They would be in districts where good programs are supported locally. Each of these schools would work with one of the eighteen universities chosen from throughout the United States; the criteria for universities would include a reputation for creative talent on their staffs. The schools and universities, working as a team, would be joined by local, state, and national HPER associations, who would give all kinds of support, publicity, consultants, and anything else needed. These eighteen programs would get underway immediately with each one perhaps innovating in a different direction. They would develop eighteen programs as pilot efforts, and, if successful, these could be disseminated throughout the United States. Physical education should start now. Operation Headstart showed us that we can do this in a very short time. We could have this project underway with very little effort. At least two school years would be needed for total fulfillment. We need crash efforts now.

We have a few new ideas in physical education but not enough. We need more and we need to rekindle some old ideas that we never adopted. Perceptual motor theories, for example, spell out the significance of motor activities for ages three through seven. Most school districts do not have full-time elementary specialists for each school, yet they are the most important years. In the studies of kindergarten children, the greatest deficiency of many has been in the area of motor encoding. But where is the physical educator in most kindergarten and first year classes in the United States? It is further interesting to note that the perceptual motor material has been quite important in remedial work with the retarded children projects, even at the junior high school level.

We do have some new materials in health education, but most schools are not using them yet. We should be using the concept approach to teaching health. We need more of the School Health Education Study efforts.

Physical education classes in the secondary schools should be optional. If we provide a firm base and good attitude in the elementary school, if we show the necessity of physical education, if we have interesting and challenging programs, we will not need to lobby to keep physical education required. Arrangements can be made for those who always avoid physical education, but there would be few of these persons if programs were tailored on the basis of need, interest, and ability. Wilson School has all subjects, including physical education, optional K-12, and students do choose the subjects providing relevancy.

The movement education approach offers the most refreshing idea in physical education, but this is having difficulty gaining acceptance. Fortunately universities like Simon Fraser are now developing movement education programs, and starting where it is most important--at the elementary level.

A new, revised kind of journal would help. The present AAHPER Journal is rather inadequate as far as aiding the development of a challenging, creative, and innovative type profession. It does not stimulate. In summary, when one surveys the field of new ideas in physical education, there is not much available.

We need to have team teaching and daily scheduling as part of the physical education programs. For example, if 180 boys and girls are assigned to a block of time for physical education, they might have six teachers. These six should not divide these students into groups of thirty and work in isolation. They should work as a team to be able to create dynamic individualized programs through the benefit of professional interaction.

In teaming the instructors pool their abilities, ideas, successes, and failures. They plan, instruct, and evaluate together. They teach some classes in large groups because there are times 100 or 180 can work together in a physical education activity. They teach classes in small groups because there are times five or ten make the best group. They use independent study and individualized laboratory activities where students can work on their own, either as part of a class or during unscheduled time. Open instructional labs and recreation labs are a great blessing in physical education. Most programs can function best in an individualized open lab situation. Team teaching can provide the developmental and corrective programs lacking in most schools. It allows the best instructor, whether male or female, to teach the class. Further, they can vary the amount of time for instruction. Some days they may need ninety minutes for their classes; other days perhaps only forty minutes are required. Teachers should be able to request the time they need on any given day. Five fifty-five minute periods are not the best way to teach physical education. In optional attendance schools, students spend as much time as desired in physical education--all day if they wish.

Further, the old football, basketball, softball curriculum needs to be replaced by more appropriate programs for individuals. As we look at the world of 2000 A.D., home fitness programs--with treadmills as part of the basic furniture--need to have priorities for city dwellers. Neighborhood clubs should be stressed. Large group sports should receive less attention, as should expensive space and equipment individual sports. The programs that should be stressed are those physical activities which an individual can do by himself in small spaces. Then should come family home activities that are becoming possible in our society, such as inexpensive indoor home swimming pools; the neighborhood club concept is next in importance, followed by individual traditional activities. Last to be taught in the upper years should be football type activities. This does not mean team sports should not be offered as part of some programs, but they should be included after the others are provided for, not as first priority. The home fitness lab, physiology of exercise, and a real commitment to daily activity, with equipment, space, and activities that are possible at home, should have priority.

There is need for a new kind of publicity. We need neighborhood handball courts. We need local exercise clubs. The things we don't have reflect the present physical education programs. Generally the publicity is poor. When people vote, they often vote against physical education; when people do things they sit; they watch TV rather than play handball or take a walk. We need to mirror physical education programs in the community.

Many physical educators hold key positions at the local leadership level. They have important parts in the change process. Some must be research and development men; they must invent new ideas. Others must be diffusors. They must help to spread the new ideas. The mechanics of change are difficult. It takes four weeks, eight weeks, sometimes three months or a year to get people to understand why we are changing and how we can change. Some must adopt and work with materials to see that they are actually improving what happens to boys and girls. Some must get busy and do what has not been done.

We need a national explosion in health and physical education. If many physical educators began massive excited national movements under dynamic leadership, the programs we dream about could become a reality.

Turning now from the negative to the positive, if what has been indicated above is basically true, and if some of the above broad suggestions make sense, the question still faces the practicing physical educator: "What can I do right now in my position and in the gymnasium?"

Here are some specific suggestions:

1) See to it that there is an excellent "kindergarten through second grade" physical education program in the district where highly trained physical educators work on an individual/diagnosis/prescription basis with each child. The high school program may have to suffer during this adjustment period by giving up staff, money, equipment, and facilities to the elementary school.

2) Within the situation available, give 150 percent for a year or two, rather than 80-100 percent, to the instructional physical education program.

3) Refuse to teach five classes and coach, even for extra pay--or at least coach only one sport.

4) Individualize instruction--have every child in an individually prescribed program.

All this can be accomplished; presented below first is a rather easy illustration of individualization; illustrations of a more complex nature follow later. Calisthenics are a simple way to start demonstrating how individualization can occur.

In most physical education programs around the states, the students come out of the dressing room at a given time and line up for roll call. The instructor often has group warm up or group developmental calisthenics. As soon as the instructor has done this he has made a serious error. Yet about 90 per cent of the physical education programs in America still operate that way. The group prescription in the physical education classes generally does damage to individuals. The dosage for the advanced physical fitness students is not tough enough and yet it is too strenuous for the less fit individuals. Having everyone do the same type of sit up can often do further damage to the child's physique, as it may be just the opposite type of sit up from what he needs for his particular posture or developmental problem.

What must be done in physical education is to individually diagnose and prescribe for the needs of each individual the same as a doctor would diagnose and prescribe for his patient. In the area of calisthenics, the instructor can give a series of fitness tests, can evaluate posture, can give skills tests, and can make subjective analysis of the needs of the individual. Based on the best possible judgment and test results, each individual student can be given a calisthenics prescription based on his particular needs. The specific exercise to be performed, the number of repetitions, and information as to when to increase the repetition can be described on this sheet for the individual.

Armed with this information, rather than exit from the locker room and line up for roll call and calisthenics, the student can come out and begin working on his individual prescription. As he does each of the exercises, he can record his progress for that day. The instructor is free to move around the gymnasium helping individuals and evaluating the progress of individuals.

Some students may need to be on an individual developmental program most of the week. Others can be on it only three times a week, while a third group may spend only 10-15 minutes each class meeting. Group work can be provided where individuals have common needs and can work together on certain exercises. Fun activities or a break away from the traditional calisthenics can be provided those remedial students by occasional group activities in a sport suited generally to the developmental level of the individuals involved. One reason why coaches must not teach five physical education classes and coach in addition is that they must create individual prescriptions for all the students in the class as well as their athletic teams. The way it is now, administrators dump one-third more students into physical education than other classes on the basis that physical education is play and does not require preparation by the teachers. When the instructor finds himself writing 250 individual prescriptions, plus 50 more for the track team, he gives up and instead as an escape, plans group activity oriented physical education programs during the five periods so that he may spend more time on individualizing with his track team. Obviously a brand new prescription is not needed everyday, no more than the doctor changes the prescription for his patient everyday, but an individual prescription needs to be made and then reviewed from time to time and perhaps an alternative prescription given when the present one either ceases to be adequate or proves that it is not getting the job done.

Relating this type of individualization to class activities, we have found that it is practically unnecessary to require a group to come to physical education at any given time. Generally physical education is taught in an open lab environment. The students come to the lab during the time they are not scheduled in other activities and work at their own program and at their own pace. We have found, for example, that a student accomplishes more attending three 90-minute lab periods, than in five 55-minute traditional periods. The girls enjoy coming more because we provide hair dryers and mirrors, and allow them enough time to shower at the end of the 90-minute period so that they can look pretty when they leave the locker room, instead of worrying over damp hair, lack of make-up, or a rushed job of getting dressed and back to class. We also know that physical education in kindergarten is more important than in the high school. The same kind of individualization and open lab activities can take place in the elementary as well as in the high school.

As students come to physical education for their so-called regular activities, the instructor must do the same kind of diagnosis and prescription as related to the kinds of sport activities appropriate to the individuals as he has with the calisthenics program. Flag football, for example, which is the common curriculum all over the United States in the 7th grade, is not appropriate for all 7th graders. As was mentioned before, some 7th graders are 9th graders and some are 5th graders, and some can throw the ball 50 yards and some 15, and some like flag football and some do not. To put all 7th graders into a group taught flag football class is an absolute tragedy.

Therefore, the coach must decide which ones of the students are ready for flag football and at what level of flag football and what skills are needed. During the open lab period, it does not matter whether 6th, 7th, or 8th graders come into the gymnasium or on the play field. The question revolves around whether the individual is ready for the instructional part or game part of the flag football program that the instructor has planned for that day. Individuals and small groups of students can be worked with in the open lab situation. There are usually enough in the gym to form groups when the instructor so desires. Many students work part of the time on their own in independent activities because they are the only ones with that need or at that level. At other times they combine with students of like abilities for participation in a game or for small group instruction on a similar skill.

If the instructor feels he must have the group sent at a certain time in a daily scheduled school, he can request that particular time by turning into the scheduling team his need for that particular day; thus it is still possible to get large groups or a certain homogeneous group when needed. Of course, in the traditional schedule, teachers can easily do this because the same students come everyday and here the instructor must merely plan appropriate activities for the group sent to him.

When the individuals finally arrive, regardless of how they got there, some should work most of the period on individual developmental activities such as calisthenics, weight training, and rope climbing. Other students should spend part of the period on individual work and then participate in a small group activity such as badminton, basketball, relays, or instruction in a certain skill of a sport such as the forehand in tennis or a certain step in dancing. When a large group is needed, such as for volleyball tournaments involving six or twelve teams, the instructors may request the students who have learned volleyball to the level of performance required in the type of tournament planned. In other words, there is a need for some homogeneous large grouping in physical education, some heterogeneous large grouping, some sex grouping--sometimes the boys and girls should be separated for certain activities and sometimes they should be together, but in the assignment to physical education there should not be a separation into boys and girls physical education. The staff should work as a team--and sometimes the large grouping should be on the basis of interest in a certain activity.

Small groups should function similarly, sometimes homogeneous and sometimes heterogeneous. Individual activities should be prescriptions for that particular person based on need, interest, and ability. Loop films, tape recorders, film strips, and movies should all be available in the resource center for students to study physical education activities, as well as a number of books and pamphlets for them to read; in other words, several types of instructional materials should be included in this center. It is possible for most students to learn tennis without an instructor if they have a self-instructional Unipac type package. Lab experiences are obviously needed in physical education; the large group, small group, and independent study can be either sitting or activity oriented. The lab experiences generally are activity involved. Research projects should be undertaken by the staff whenever possible to determine results of specific programs with specific students. Except for a required prescription, the activities chosen by the students, especially in the upper years, should be on a self-selection smorgasbord basis.

It is possible to spell out in physical education a complete individualized program for all students in all activities. Sometimes in this individualized program the student is with a large group, sometimes he is with a small group, sometimes he works on his own, and sometimes he has a specific lab problem assigned. More of the gym floor work is done individually or in small groups. There is nothing theoretical about an individualized program in physical education. It is possible if the administrator will give the physical education person no more of a load than any other teacher is expected to carry, and if the instructor is dedicated toward improvement for each individual. The instructor who is more concerned about athletics and/or does not have time for 200 individuals each day on the gymnasium floor has been the cause of the sad plight that we find physical education in throughout the United States.

In summary, in order to correct these deficiencies in physical education, instructors should be given a load no greater than instructors in other classes; teacher aides should be available in physical education as well as in other subjects. The person who is coaching should not teach five physical education classes in addition, and should not be paid extra for coaching, but should have built in as part of his load the coaching experience. The instructor must write self-instruction materials and must purchase through school funds loop films, tapes, and types of media. A whole new vista in physical education is possible.

There is need for an entire book to be written on this subject; it should spell out in detail how physical education can be an innovative, exciting, individualized experience for all students. As we personalize programs in the schools and give students choices, we find that many of them do not select physical education. Their experiences in the area of the psychomotor domain has been so bad that the affective domain has been damaged, and thus the cognitive never jells. Physical education programs can be individualized and personalized to the extent that students want to get into the program. There is no need for the pressure of required physical education after the early years for most students, if the right program is started in the kindergarten. Where the student has difficulty in physical education in the upper years of school, it is often best to let him drop the activity for awhile and then get him back into it when the affective domain has been satisfied. Requiring a student who is negative toward physical education and who lacks skill in the activity to take another semester in a group prescribed traditionally oriented physical education program is another one of the errors we make in education.

With a real commitment toward better physical education programs through a philosophy of individualization, and armed with a book describing specifically how it can be done in each activity, written by innovative physical educators, most any school in America can tremendously overhaul its whole physical education program. It can be done; many could write such a book if given time, but the hope of this brief chapter is that it will spark some administrators and some physical educators to rethink their entire attitude toward their programs in health and physical education.

chapter iv

using teacher aides

co-author Herb Teske

The increasing use of paraprofessional personnel in the public schools makes necessary the formation of guidelines and policies that can be used by administrators and boards of education. State departments of public instruction in cooperation with teacher and administrator organizations must formulate guidelines to shape future direction for school staffing. The major purpose of this chapter is to suggest the guidelines which districts generally should follow when planning for paraprofessionals. There should be no need to impose rigid state certification laws if districts adhere to the spirit and intent of paraprofessional employment.

The primary concern of the various groups of educators, as policies are established, is to be certain that the activities of paraprofessional personnel are under the direct supervision of professional teachers. When certified teachers assign the tasks, there is no question as to whether the aide is usurping the job of a professional. The aide does those things she is competent to perform, as determined by the teacher staff.

School districts which have experienced difficulty with the use of auxiliary personnel have often failed to insure a continuous effort by teachers to cooperatively plan the activities of aides. The teachers and the aides must have time scheduled during the school day for face-to-face contact so that details about the program for children can be intelligently and carefully outlined.

In team teaching situations, the aide must become an active participant in most planning sessions so that assigned tasks for the aide grow out of a discussion of priorities necessary for the improved utilization of the professional teacher's time. The basic distinguishing feature between professionals and paraprofessionals is that the certified teachers are the ones who should have the clinical training, and thus the responsibility for individual diagnosis and prescription for the children. The aide should be viewed as an additional resource to better accomplish the instructional task.

State departments must be careful that established policies regarding the use of paraprofessional personnel do not bog down in a series of regulations that establish certification based on college credits or other criteria that cannot be met in rural areas. A requirement that an aide have a certain arbitrary number of college credits does not insure that a given individual will perform well. A personal interview by the administrators and teachers planning to work with the aide would be more important. The individual should be hired on the basis of need--to strengthen the abilities of the teaching staff.

There is no intention in the employment of paraprofessionals to put teachers out of a job. With the increasing shortage of teachers, especially good ones, schools are faced with the necessity of arranging staffing patterns similar to those of a hospital. Some teachers will become doctors and some nurses, and paraprofessionals will play the role of nurses' aides. Further, experimental teams of five teachers and six aides for 175 students have given indications of being a better staffing pattern than seven teachers and no aides. With an adult ratio of a maximum of 1-10 needed in the primary program, aides become essential in most budget allocations.

Never should the employment of aides reduce the amount of money spent for the instructional staff. If a district has been hiring on a basis of 1-25 at a cost of X dollars, and then that district decides to employ on a 1-40 professional ratio in order to hire aides, the same amount of money should be spent for instructional salaries, as if the district were still hiring on a 1-25 basis. This type of standard would actually increase the adult-student ratio in many schools for the same expenditure of money, since approximately three aides can be hired for the salary of one professional teacher. A realistic regulation prohibiting a district from reducing its instructional budget as a result of the utilization of aides, and an understanding that aides be used to supplement professional teachers, could well avert potential abuse by school districts who are financially disadvantaged and insure a continuation of quality education for the students.

While it is most desirable that state departments refrain from rigid certification regulations, suggested utilization criteria should be established. Pay scales usually are differentiated according to background and experience; for example, instructional aides receive higher salaries than supervisory aides. All aides must understand that often part of their duties will be helping with "little" things such as tying shoes, cleaning paint brushes, and stapling worksheets. A description of paraprofessionals using the following categories seems workable as part of the guidelines for hiring:

1. Instructional Aide - This person should have some college training. Districts could well set up their own qualifications in this area; larger districts where a supply of college trained people exist could establish higher requirements; a guideline of two years of college or university training might be established for the instructional aide in many communities.

The instructional aide can be a person who works with small groups of children needing additional or special help with a given skill. A well trained aide in subjects such as music, art, or foreign language could well be used to supplement areas where the professional staff is deficient. If a school finds an excellent candidate, but one who has no college, that person should be hired; the quality of the person is the key, not college courses; other things being equal, some college is preferable, but may be impossible in rural areas. Ability to work with kids and knowledge of the subject are much more important.

2. Clerical Aide - This type of paraprofessional need only have the skills necessary to type, record, and maintain all types of school records. Persons with business and secretarial training or experience are usually available. They should type and mimeograph for teachers and can correct objective evaluations.

3. Supervisory Aide - A love for children and ability to communicate this love is of utmost importance. A supervisory aide under the direction of the professional teacher can supervise playgrounds, cafeterias, resource centers, rest periods, and study areas, thereby freeing the teacher for instructional tasks. A housewife with no particular training other than experience in handling children can be used to fill this role. She can function as part of the teacher-to-talk-to program, whereby each child can select an adult to know well. The supervisory aide usually has the responsibility of more of the "little" items mentioned above.

4. Special Aide - Automation and technology will demand the use of help in the operation of all types of audio visual equipment if the teacher is to effectively utilize time for instruction and individualized work with students. Research which shows that retention increases with the use of devices enabling the student to see as well as to hear continues to emphasize the importance of a multi-media approach to instruction. Preparation of visual materials for the teacher to use is a necessary facet of a sound media program. Persons with an interest in mechanical devices, and those with an ability in art would be of tremendous value as special aides.

Summary:

Of course, combinations of the four types of aides can be secured, depending upon need and size of the district. In any case, if aides are hired by local school boards on the basis of empirical evidence of competence based on the needs of the educational program, rather than on the basis of arbitrarily imposed requirements, a dynamic program of staff utilization can be built by the cooperative efforts of administrators, teachers, and aides.

chapter v

some educators to know

It is difficult to mention names of those interested in innovation, as there are now so many people involved in changing schools in the United States. Certainly the accompanying list is in no sense a majority of them or necessarily a list of the best individuals; there are many excellent resource persons not included here; there are many not known to the author. Further, the names change from year to year as people enter and leave the innovation field. However, there are two reasons for listing these individuals here:

(1) They are people who over the past ten years have helped to implement change in schools; they can be of value to those seeking to change schools.

(2) "Change agents" are continually asked: Where can we get a consultant or visit with someone who is really knowledgeable about change in a certain area or topic?

These are people who could either help directly, or who could suggest a consultant or source of information nationally or regionally. Treat this list as only being suggestive of the kinds of individuals now available who have some interest and experience in change; remembering that there are many others not even mentioned here, the list should be of help. Further, please keep in mind that innovators seem to move often, so many addresses will soon be out of date, but usually they can be eventually located in their new positions through contact at the old address.

Some Educators to Know

Name	Specialty
Dr. Dwight Allen, Dean School of Education University of Mass., Amherst	Teacher Education
Dr. Robert Anderson School of Education Harvard University	Nongrading
Dr. Virgil E. Blanke College of Education Ohio State University Columbus, Ohio 43210	Change Process
Mr. Ralph G. Bohrson Ford Foundation 477 Madison Ave. New York, New York 10022	Change Process
Dr. Evelyn Carswell Rt. 9, Box 225 Tucson, Arizona	Elementary Schools

Dr. Robert Chinn Human Relations Center Boston University Boston, Mass. 02100	Change Process
Mrs. Alice Coffman Director - Pre-kindergarten Programs University City Schools University City, Missouri	Pre-kindergarten
Dr. Luvern L. Cunningham, Dean School of Education Ohio State University Columbus, Ohio	Change Process
Dr. Harold Davis, Director Teacher Education Program Southern Connecticut State College New Haven, Connecticut 06515	Team Teaching
Dr. Marion Donaldson Academic Vice-President Maricopa County Jr. College District Phoenix, Arizona	Administration
Mr. Robert Dunsheath Curriculum Director Clark County School District Las Vegas, Nevada 89100	Daily Scheduling
Dr. Thorwald Esbensen School of Education Florida State University Tallahassee, Florida	Individualizing Objectives
Dr. Robert Finley, Supt. Glen Cove Public Schools Glen Cove, New York 11542	Administration
Dr. Jack Frymier School of Education Ohio State University Columbus, Ohio	Curriculum
Dr. Allan Glatthorn, Principal Abington High School Abington, Pennsylvania	Secondary Education
Dr. Keith Goldhammer, Dean School of Education Oregon State University Corvallis, Oregon 97403	Higher Education
Dr. Harold Gores, President Educational Facilities Laboratories 477 Madison Avenue New York, New York	Facilities

Dr. Justyn Graham Division of Education Central Missouri State College Warrensburg, Missouri	Elementary Schools
Dr. Ann Grooms Museum Building, Suite 200 3915 Plainville Road Cincinnati, Ohio 45227	Dissemination
Dr. Egon G. Guba National Institute for Study of Educational Change University of Indiana Bloomington, Indiana	Change Process
Miss Lois Hachtmeyer University City Schools University City, Missouri	English-Social
Mr. Richard Halsey 1000 Emerald Lane Carbondale, Illinois	Resource Centers
Dr. Kenneth H. Hansen School of Education Washington State University Pullman, Washington	Philosophy of Change
Mr. Eugene Howard International Learning Corporation 440 East Las Olas Fort Lauderdale, Florida	Dissemination
Dr. Bruce Howell Assistant Superintendent Tulsa Public Schools Tulsa, Oklahoma	Middle Schools
Dr. Robert Howsam, Dean School of Education University of Houston Houston, Texas	Teacher Education
Dr. James Jester Director Laboratory School Southwest Missouri State College Springfield, Missouri	Administration
Mr. Lloyd N. Johansen, Director Title III Program Racine Public Schools Racine, Wisconsin	Secondary Education

Dr. Charles Jung Center for Utilization of Knowledge University of Michigan Ann Arbor, Michigan	Small Groups
Dr. Philip Kapfer Research Consultant Clark County Schools Las Vegas, Nevada	Evaluation
Rev. Robert J. Keck, S. J. Director, 3 - 3 Program Fordham University New York, New York	Secondary Education
Dr. Ralph Kimbrough School of Education University of Florida Gainesville, Florida 32601	Community Relations
Dr. Glenn Kirchner Simon Fraser University Burnaby, British Columbia	Physical Education
Rev. C. Albert Koob, Exec. Sec. National Catholic Educational Association Washington, D. C.	Dissemination
Dr. Roy Larmee School of Education Ohio State University Columbus, Ohio	Planning
Dr. Herbert F. Lionberger Dept. of Rural Sociology University of Missouri Columbia, Missouri	Evaluation
Mrs. Dorothy Mial National Training Laboratories, NEA Washington, D. C.	Human Relations
Dr. John Michaelis University of California Berkeley, California	Curriculum
Dr. Richard I. Miller School of Education University of Kentucky Lexington, Kentucky	Planning/evaluation
Dr. Edgar Morphet, Director Designing Education for the Future Denver, Colorado	State Departments

Dr. Glen F. Ovard School of Education Brigham Young University Provo, Utah	Individualizing Instruction
Dr. Edward Pino, Supt. Cherry Creek School District Englewood, Colorado	Administration
Dr. Everett Rogers Dept. of Communication Michigan State University East Lansing, Michigan	Change Process
Dr. Marshall B. Rosenberg, Psychologist Del Crest Plaza Building 8420 Delmar Blvd. St. Louis, Missouri	Problem Learners
Dr. Louis J. Rubin, Director Center for Coordinated Education University of California Santa Barbara, California	Planning/Evaluation
Dr. Harvey Scribner, Commissioner State Department of Education Montpelier, Vermont	State Leadership
John Shaver & Company, Architects P. O. Box 1118 Salina, Kansas	Architecture/Facilities
Dr. Ira J. Singer, Ass't. Supt. West Hartford Public Schools West Hartford, Connecticut 06119	Automated Schools
Dr. James E. Smith, Jr. Educational Associates, Inc. 440 Las Olas Fort Lauderdale, Florida	Dissemination
Mr. Gardner Swenson, Director Materials Dissemination Center 12345 Westminister Ave. Santa Ana, California	Dissemination/UNIPACS
Mr. Ray L. Talbert Oregon Compact Title III, ESEA Salem, Oregon	Secondary Education
Dr. Russell Tuck, Ass't. Principal University City Schools University City, Missouri	Secondary Education

Dr. J. Lloyd Trump, Assoc. Sec. National Assoc. of Secondary School Principals 1201 16th St. N.W. Washington, D. C.	Dissemination
Mrs. Glenys Unruh, Ass't. to Supt. University City Schools 640 Harvard Avenue University City, Missouri	Curriculum Development
Mr. Richard Vale, Principal Ford Junior High School Berea, Ohio	Junior High
Dr. Emmett Williams School of Education University of Florida Gainesville, Florida	Middle Schools
Dr. Spencer Wyatt, Principal Roy High School Ogden, Utah	Secondary Education

chapter vi

schools to discuss

Here is a list of several of the schools in the everchanging parade of districts which have tried innovative approaches--some are still leaders--some have fallen aside. Personal visits have not been made to all the schools or colleges appearing here. Some have been visited, others have been recommended by friends. These are not necessarily the most innovative either. They certainly do not have all the exciting new programs in operation, but in most cases, visitors can see some of the innovations in operation, or at one time could have seen some of them.

It is further difficult to publish such a list as the schools constantly change. As the innovative leaders of some of these programs move on, the replacement people do not always carry on with the same drive. Then, too, new schools are opening each day, some with better programs than any listed here.

However, in spite of the fact that there is no one school in the United States that is a "must" to visit, the following may offer some help to those who still need to visit different types of models and/or efforts. They are schools that at some time during the past ten years have attempted to develop exemplary efforts. Though several have stopped innovating, or are on their way down, and though new schools are taking their places, the schools named do show that there have been pioneers trying to find better ways to educate boys and girls; these do testify to the fact that some schools have tried different models the past ten years.

Nova Schools
Fort Lauderdale, Florida

University City School District
University City, Missouri

Evanston High School
Evanston, Illinois

Newton South High School
Newton, Massachusetts

Joel E. Ferris High School
Spokane, Washington

Roy High School
Ogden, Utah

Franklin High School
Livonia, Michigan

Lakeview High School
Decatur, Illinois

Fox Lane Middle School
Mount Kisco, New York

Barrington Middle School
Barrington, Illinois

Ruby Thomas Elementary School
Las Vegas, Nevada

UCLA Elementary Laboratory School
Los Angeles, California

Horace Mann Elementary
Newton, Massachusetts

Martha Campbell Elementary School
Madison Heights, Michigan

Marshalltown Elementary
Marshalltown, Delaware

Matzke Elementary, Cypress Gardens
Houston, Texas

Ridgewood High School
Norridge, Illinois

Miami Springs High School
Miami Springs, Florida

John F. Kennedy High School
Silver Springs, Maryland

John Marshall High School
Portland, Oregon

Meeker High School
Meeker, Colorado

Southwest High School
Green Bay, Wisconsin

Hall High School
West Hartford, Conn.

Abington Senior High School
Abington, Pennsylvania

Meadowbrook Junior High School
Newton Center, Massachusetts

Poway High School
Poway, California

Tufts Road Elementary
Winchester, Massachusetts

Lula Walker Elementary School
Tucson, Arizona

Bushey Drive Elementary
Montgomery County, Maryland

Granada Community School
Corte Madera, California

Weldon Elementary
Abington, Pennsylvania

Top of the World Elementary
Laguna Beach, California

Salt Creek School
Elk Grove Village, Illinois

Bancroft School
Andover, Massachusetts

McAnnulty School
Pittsburgh, Pennsylvania

Foster School
Evanston, Illinois

The following colleges and universities have begun innovation at the higher education level and are usually favorable to students who have graduated from innovative schools:

Antioch College
Yellow Springs, Ohio

Nova University (grad only)
Fort Lauderdale, Florida

Prescott College
Prescott, Arizona

Simon Fraser University
Burnaby, British Columbia

Bensalem College, Fordham University
New York, New York

Franconia College
Franconia, New Hampshire

Florida Atlantic University
Boca Raton, Florida
(upper division only)

Monteith College, Wayne St. Univ.
Detroit, Michigan

Reed College
Portland, Oregon

Johnston College, Univ. of Redlands
Redlands, California

New College
Sarasota, Florida

The following schools of education have been wrestling to develop new teacher training programs; they are in the early stages of development. The new University of Houston facility, for example, has the potential to provide one type of new national model. There are obviously many others, some who may be doing much more, but these few are listed to indicate that there is a growing national effort for new directions in teacher education. Eight of these have been members of the teacher training models project, sponsored by the Research Bureau of the U. S. Office of Education. Copies of their efforts are available from that organization.

University of Houston
Houston, Texas

University of Massachusetts
Amherst, Massachusetts

Simon Fraser University
Burnaby, British Columbia

Oregon State University
Corvallis, Oregon

Syracuse University
Syracuse, New York

Teachers College
Columbia University
New York, New York

Ohio State University
Columbus, Ohio

Michigan State University
East Lansing, Michigan

University of Wisconsin
Madison, Wisconsin

Wayne State University
Detroit, Michigan

University of Florida
Gainesville, Florida

Stanford University
Palo Alto, California

Florida State University
Tallahassee, Florida

University of Georgia
Athens, Georgia

University of Pittsburgh
Pittsburgh, Pennsylvania

University of Illinois
Champaign, Illinois

University of Toledo
Toledo, Ohio

University of California
Los Angeles, Califoriia

chapter vii

a few organizations

Here is a list of a few of the organized groups attempting to support the need for change in American education. Again this list is not an attempt to be all inclusive or even an attempt to make sure all the important organizations which have some dealings with the change process are listed. These are merely organizations which have been helpful and could possibly help put an educator in touch with interesting change programs around the country.

Further, these are sometimes of value for only short periods of time. For example, one of the best, Designing Education for the Future, was just a five year project and is now closing. However, their materials remain quite pertinent and are now available from Citation Press, 50 West 44th Street, New York, New York.

International Learning Corporation
Fort Lauderdale, Florida

Individualizing Instruction and
Learning
Provo, Utah

Ford Foundation
New York, New York

Association for Supervision and
Curriculum Development
Washington, D. C.

National Association of
Secondary School Principals
Washington, D. C.

National Educational Association
For Research and Development
Fort Lauderdale, Florida

Designing Education for the Future
Denver, Colorado

Phi Delta Kappan
Bloomington, Indiana

National ERIC Centers
Available from USOE

Russell Sage Foundation
New York, New York

Committee for Economic Development
New York, New York

Carnegie Foundation
Pittsburgh, Pennsylvania

Education Commission for the States
Denver, Colorado

Danforth Foundation
St. Louis, Missouri

Kettering Foundation
Dayton, Ohio

Rockefeller Foundation
New York, New York

Educational Associates
Fort Lauderdale, Florida

Educational Research and Planning
Palo Alto, California

International Study Institute
Boca Raton, Florida

Esso Educational Foundation
New York, New York

chapter viii

some interesting curriculum projects

Here are a few curriculum developments, some now 'old,' some brand 'new,' but still of interest to those trying to change schools. The past ten years have witnessed the development of many new curriculum projects. Most are now known by leaders in the school districts in America, although there are still a number of individual educators who are not yet aware of them. Some are now being replaced, while others are so new that they are not yet fully completed. So many new ones have come on the market this past year that at this writing, few educators are up-to-date on all the latest materials. Many "projects" have now been purchased by publishing companies and are appearing as "textbooks."

The only reason for listing the following projects or publications is not to recommend them, or to suggest that they are new, or that they are the best or the most current, but to emphasize here that it is CRUCIAL that a school undertaking innovation must do everything possible to keep abreast of all the major curriculum developments and use all that seem better than those materials now in use in the school. Once about 60 percent of the schools are using the materials, the innovative leaders usually start looking for something that might be better; the 60 percent adoption seldom occurs until they are out of date with the curriculum leaders.

The major fault with the materials which are listed below is that most all are designed for group paced or structured types of teaching situations. For example, already most of the major science projects, now published by commercial companies, are obsolete. The truly flexible schools must adopt, adapt, and innovate in the area of curriculum to get self-instructional, individualized materials. The single textbook concept, with supplementary reading texts, selected from some of the major textbook companies, must become a forgotten method. The innovative schools are usually one step ahead in the adoption of new projects.

Here are just a few of the early materials which helped the innovators get started. They need to be replaced by those just appearing. Between 1970-1975 we are going to be flooded with new materials which supposedly will help individiualize instruction. This current list is just a reminder to make sure that the staff in each school is aware of the latest curricular efforts, especially those which have not yet reached the commercial publishers.

Again, the purpose here is not to suggest these as the "best" or "latest," but merely to encourage the changing school to be abreast of all there is in curriculum.

American Association for Advancement
of Science
Commission of Science Education
1515 Massachusetts Avenue, N.W.
Washington, D. C.

Educational Development Center
Science Project
Cambridge, Massachusetts

Science Curriculum Improvement Study
Department of Physics
University of California
Berkeley, California

School Science Curriculum Project
College of Education
University of Illinois
Urbana, Illinois

Elementary Science Study
Webster Division
McGraw Hill Book Company

Earth Science Curriculum Project
Houghton Mifflin Company

Biological Sciences Curriculum
Study (Blue)
Houghton Mifflin Company

Chemical Bond Approach Project
Webster Division
McGraw-Hill Company

"100 Invitations to Investigate"
Harcourt, Brace and World, Inc.

Illinois Test Psychological Abilities
- Early Childhood
University of Illinois Press
Urbana, Illinois

Beery Test - Early Childhood
Follett Publishing Company

Lincoln-Osertsky Early Childhood
Motor Development Scale
C. H. Steeding Company, Chicago

Movement Education in Physical
Education
Department of Physical Education
Northern Illinois University
Dekalb, Illinois

Elementary School Physical Education
Project
Simon Fraser University
Burnaby 2, British Columbia

Greater Cleveland Physical Education
Project
Rockefeller Building
Cleveland, Ohio

Concepts in Science
Brandewein Series
Harcourt, Brace & World, Inc.

Minnesota School Mathematics
and Science
Teaching Project (MINNEMAST)
University of Minnesota
Minneapolis, Minnesota

Introductory Physical Science
Study Committee
Prentice Hall, Incorporated

Biological Sciences Curriculum
Study (Green)
Rand McNally and Company

Biological Sciences Curriculum
Study (Yellow)
Harcourt, Brace and World, Inc.

Chemical Educational Material
Study (CHEM Study)
W. H. Freeman and Company

Harvard High School Physics
Harvard University
Cambridge, Massachusetts

Frostig Test - Early Childhood
Follett Publishing Company

Wepman Test - Early Childhood
Language Research Associates

Title III Early Childhood
Programs
University City Schools
University City, Missouri

ESEA Title III Project
Movement Education,
Elementary Schools
Plattsburgh Public Schools
Plattsburgh, New York

School Health Education Study
(SHES)
3M Company
Minneapolis, Minnesota

Sex Education in the School
Curriculum
University City Schools
University City, Missouri

Individual Physical Fitness Program
Department of Physical Education
Roy High School
Ogden, Utah

Evaluation of Independent Physical Education
Lakeview High School
Decatur, Illinois

Vocational Education Project
Stout State College
Menomonie, Wisconsin

SRA Reading Series
Science Research Associates, Ind.

The Bank Street Readers
Macmillan Company

Early-to-Read: ITA Program
Initial Teaching Alphabet Publications

ITA (Greater Cleveland)
Educational Research Council of Greater Cleveland
Rockefeller Building
Cleveland, Ohio

3M Reading Program
3M Company
Minneapolis, Minnesota

Nebraska English
University of Nebraska Press
Lincoln, Nebraska

IPI (Individually Prescribed Instruction) in Math and Reading
Learning Research and Development Center
University of Pittsburgh
Pittsburgh, Pennsylvania

Department of Home Economics, NEA
Curriculum Guide
1201 16th Street, N.W.
Washington, D.C.

University of Illinois Arithmetic Project
Educational Development Center
15 Mifflin Place
Cambridge, Massachusetts

American Institutes for Research
Vocational/Technical
Pittsburgh, Pennsylvania

Vocational Education Project
Ohio State University
Columbus, Ohio

Vocational Education Project
Platteville State College
Platteville, Wisconsin

Reading with Phonics
J. B. Lippincott Company

Programmed Reading
McGraw-Hill Book Company

Words in Color
Xerox Educational Division

Palo Alto Series
Harcourt, Brace and World, Inc.

Random House Pace Setters
Random House Publishers
New York, New York

Oregon English Program
Holt, Rinehart and Winston

Carnegie Tech English for College Bound Students
United Business Service
Pittsburgh, Pennsylvania

Educational Media Index
McGraw-Hill Book Company

Individual Home Economics Program
Brookings High School
Brookings, South Dakota

Greater Cleveland Mathematics Program
Rockefeller Building
Cleveland, Ohio

School Mathematics Study Group
School of Education
Stanford University
Stanford, California

Primary Mathematics Materials
Xerox Education Division

The Madison Project
R. Davis, Director
Syracuse University
Syracuse, New York

Minnesota Mathematics and Science
Teaching Project
University of Minnesota
Minneapolis, Minnesota

University of Maryland Mathematics
Project
College Park, Maryland

Secondary School Mathematics
Curriculum Improvement Study
Teachers College
Columbia University

Elementary School Economics Program
Industrial Relations Center
University of Chicago
Chicago, Illinois

Greater Cleveland Social Science
Program
Rockefeller Building
Cleveland, Ohio

Conservation Education Improvement
Project
College of Education
University of Wyoming
Laramie, Wyoming

Preparation of Teaching Guides and
Materials on Asian Countries for
Use in Grades 1-12
Department of Education
University of California
Berkeley, California

Anthropology Curriculum Project
University of Georgia
Athens, Georgia

A High School Social Studies
Curriculum for Able Students
Carnegie Institute of Technology
Pittsburgh, Pennsylvania

Chilton Visual-Aural-Oral Foreign
Language Courses
Chilton Books
Philadelphia, Pennsylvania

University of Illinois
Committee on School Mathematics
College of Education
University of Illinois
Urbana, Illinois

Match Box Project
Children's Museum
60 Burroughs Street
Boston, Massachusetts

Contra Costa Curriculum Project
San Francisco State College
San Francisco, California

Development of Instructional
Materials Dealing with Racial
and Cultural Diversity in
American Life
Lincoln Filene Center for
Citizenship and Public Affairs
Tufts University
Medford, Massachusetts

A Program of Curriculum Development
in the Social Studies and Humanities
Educational Development Center
15 Mifflin Place
Cambridge, Massachusetts

Social Studies Curriculum Center
409 Maxwell Hall
Syracuse University
Syracuse, New York

Harvard Social Studies Project
Larsch Hall, Appian Way
Cambridge, Massachusetts

Foreign Relations Project
Laidlaw Brothers
River Forest, Illinois

Audio-Lingual Materials - French,
German, Russian, Italian, Spanish
Harcourt, Brace and World, Inc.

Holt Aural-Oral Language Courses
Holt, Rinehart and Winston

Clearing House for Self-
Instructional Language Materials
Center for Applied Linguistics
1755 Massachusetts Ave., N.W.
Washington, D. C.

Economics Curriculum Materials
for Secondary Schools
Social Studies Curriculum Center
Ohio State University
Columbus, Ohio

McGraw-Hill Audio Visual Language
Courses
McGraw-Hill Book Company, Inc.

The Carl Orff-Schulwerk Program
Lyon's Instrument Company
223 West Lake Street
Chicago, Illinois

Juilliard School of Music Project
Arnold Fish, Director
New York, New York

Self-Instructional Materials in
Basic Music Theory for Elementary
Teachers
Genevieve Hargiss, Director
University of Kansas
Lawrence, Kansas

Developing Musical Understanding in
Secondary School Students
Kenneth Wendrich, Director
Yale University
New Haven, Connecticut

A Demonstration of New Media and
Methods for Integrating the Arts
in the Secondary Curriculum
Robert Brown, Director
State Education Department
Albany, New York

Encyclopedia Britannica Films
McGraw-Hill Book Company, Inc.

Development Program in Music
Education
Richard Colwell, Director
University of Illinois
Urbana, Illinois

Development of a Two-Year
Curriculum in General Music
Bennett Reimer, Director
Western Reserve University
Cleveland, Ohio

The Development of a Music
Literature Course in the
Senior High School
Neal E. Glann, Director
University of Iowa
Iowa City, Iowa

Music Project
Evanston High School and Northwestern University School of Music
Dr. Guy Duckworth, Northwestern
Consultant
Evanston, Illinois

chapter ix

another bibliography on change

No attempt has been made to be all inclusive in this bibliography. There are too many books and pamphlets to even consider listing each of them. Few articles have been included, though there are many excellent ones available. Rather, this bibliography merely suggests the types of reading materials now available on the process of improvement in schools and in society through change and innovation. A number of exciting new books have been published in recent months, indicating a trend to provide additional information designed to help educators change schools.

The books listed here are organized according to the eight major chapters: ENVISIONING; CHALLENGING; RATIONALIZING; PLANNING; ORGANIZING; CREATING; EVALUATING; and REFLECTING. Attention in each of the areas has been given to change in the six basic components of a school: Philosophy; Instruction; Learning; Structure; Technology; and Reporting. Obviously there is a great deal of overlapping as the books usually cover more than one of the major headings.

Other examples of bibliographical listings available are as follows:

1. New York University List of Books in Education, Citation Press, 50 West 44th Street, New York, New York. 1968.
2. New Educational Materials, Citation Press, 50 West 44th Street, New York, New York. 1968.
3. Bibliography on Organizational Trends in Schools, Center for Study of Instruction, NEA, Washington, D. C., R. Anderson, Edt. 1968.
4. Bibliography on the Process of Change, Center on Innovation, New York State Dept. of Education, Kurland and Miller, Edt. 1968.

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EFL. *The School Library*. 477 Madison Avenue, New York.

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chapter x

currently needed literature

These are topics which are most often requested by those looking for cookbook recipes and/or for those looking for additional or new ideas to complement their own current knowledge. They have been included in this book because from school districts throughout the nation constantly come letters, questions during consultations or workshops, inquiries from visitors, and "how do you do it" pleas from administrators asking for information in these areas. Educators want some specific answers; the answers are available, but most who know them and could write are heavily involved in developing the programs and do not have time to write. For those who may have time, who may have some answers, and who are looking for a sure market, here are subjects for chapters of an entire book, based upon the needs of educators in 1969; perhaps a cover theme for these would be "Practical Models for Implementing Change in Schools." Hopefully some practicing educators will soon write some practical descriptions relating to these topics. The author could and would like to, but the press of the current position prevents such an effort now. Perhaps soon someone will develop written materials to share with all those who are searching for suggestions.

Individualizing Learning and Instruction

Computerizing Daily Variable Scheduling

Hand Constructed Daily Smorgasbord Scheduling

Writing Individualized Materials

Diagnosing and Prescribing

Student Freedom and Responsibility

Continuous Progress and Nongrading

Individualizing Each Discipline (English, Art, etc.)

Team Planning and Team Teaching

Differentiated Staffing

Relevant Curriculum

Student Involvement

Human Resources and Human Relations

Changing Teacher Education

Personalizing Programs Through Self-Selection

Matching Personalities and Perceptions

Window Shopping and Course Development

Optional Attendance and Open Campus

Changing Physical Environments

12-Month Schools with Vacation Anytime

Five Phase Instruction

Facilitation Learning--student, faculty, parent communication through intensive group experience

chapter xi

Wilson revisited, april 1970

a series of supplementary statements about the current program

The Wilson Campus School at Mankato State College, Minnesota, is not the best school in the nation. We have all the obstacles facing education today, just as the American society in general has problems with pollution, conservation, drugs, budgets, cities, and minorities. We lack quality, we are not a model; but Wilson is an example of education's need for and the ability to make rapid, massive, dramatic change. It is a serious attempt to apply the concept of humaneness (ASCD 1970 Yearbook--To Nurture Humaneness) in the day by day operation of a real school. If the ASCD book is "right," then a great majority of the present schools are "wrong."

Wilson is challenging the education curtain. Monopolies are not always the big industries in America, nor are the only police states found among some foreign powers. Unfortunately, the worst example of a monopolistic police state in America is the public school system. We require students to attend school, require certain courses, require certain books, put minus 10 wrong on the paper, and give the child an "F;" we do not allow selection of teachers or rooms or materials. We have tests on Friday and dress codes every day. We still even paddle and expel students in some schools.

What is needed in every community in America today is a philosophy of alternative educational programs. In 1970, we really do not know what is best. Therefore, there should be a wild up-side-down school, a semi-innovative school, and a structured school available to all students, parents, and teachers on an optional basis.

The current Wilson effort grew out of a previous conservative mold. Wilson, until 1968, had national exams and percentage comparisons. Our kids went to college; the parents were satisfied; we had the usual share of strong and weak teachers. We had self-contained classrooms, "A" through "F" report cards, textbooks, required seventh grade courses, period 1-2-3 schedules, dress codes, bells, and other examples of ritual and ceremony which still exist in most schools.

Wilson is engaged in about 63 changes. A few of them involve personalized programming, matching students and teachers, student development of curricula, optional attendance, smorgasbord scheduling, individualized learning, 12-month school year, student freedom, individual progress reports, all-day kindergarten, emphasis on the affective domain, five-phase instruction, a nongraded K-12 country school environment, and, and, and.

Of these, THE MOST IMPORTANT IS THE MATCH BETWEEN THE TEACHER AND THE STUDENT. Learning occurs if there is a good relationship. Personality, perception, interest, sex, age, and skill are the factors to match. If the student relates to the teacher, the battle is on the way to being won. If there is an improper match, positive learning does not occur. At Wilson each student selects all his own teachers and his advisor. No teachers are "assigned."

With the proper match, the AFFECTIVE domain then becomes the focus. Self-image, attitude toward life, being "turned on," good peer relationships, positive motivation, and perception of others are crucial. Wilson programs concern themselves first with this aspect.

The PSYCHOMOTOR domain closely follows the affective domain in importance. Gross motor, fine motor, visual motor, auditory discrimination, and others are keys in learning. Therefore physical education, industrial arts, home economics, art, and music are important courses at Wilson, especially in the primary years. Many even learn to type during this period.

Then comes the COGNITIVE. Learning is easy in this area, limited only by the individual's potential, assuming that the match and the affective and the psychomotor areas are taken care of, and assuming the school has a continuous progress program and that the home environment allows the school to function with the individual.

CREATIVITY is another concern here at Wilson. Why is it that in the conventional schools more dropouts occur among those classified as creative? Who said that math and social studies are more important than drama, speech, music, art, chorus, and other fine arts areas? At Wilson, courses growing out of the Creative Studies Team have great importance. We truly believe in a balanced curricula; English, social, and math are not kingpins, but are only equally important.

Further, we are concerned about individual learning styles, especially as they relate to progress in a self-paced program. Very few schools have paid attention to LEARNING STYLES, but it is becoming more evident every month that this is an important factor in learning. Even simple illustrations such as the fact that some students need quiet concentration and some prefer to study to the tune of noisy records shows the complexities, without even discussing the impact of listening, discussion, reading, writing, and seeing methods as they effect various individuals.

Being concerned with the affective, psychomotor, creativity, and learning style factors, as well as the cognitive, has probably done more to enhance MOTIVATION than any other single issue, with the exceptions of allowing students to choose their own teachers and develop their own courses of study.

RELEVANCY is another key at Wilson--the belief that the student best learns that which is meaningful to him at this moment in time. We are concerned about interest and frames of reference; we believe that curricular development should not be dictated by publishers, supervisors, legislators, parents, school board policies, and experts, but rather heavily engaged in by students. After all, whose education is it?

Wilson is concerned about the problems of students in urban, suburban, exurban, and rural settings. But as an example of the need for involvement in change and humaneness, look at Indian education, which the United States Senate Subcommittee said "could hardly be worse" and labeled it "a national tragedy--a national challenge." Indian education has been called "sterile, impersonal, and rigid," and seems to be part of the cause of some Indian problems. What have we done as a total national concern to enhance the Indian culture, art, costumes, customs, history, dances, legends, weapons, and beauty, and to bring about a better understanding of the Indian in America. If the analysis in the new book, Our Brother's Keeper--The Indian in White America, (Cahn, World Publishing Co., 1969), is valid, the answer can only be summarized as pitifully little.

Staff interest in helping in this area led to the selection of Wilson as one of six schools nationally to participate in a joint NASSP/BIA project on innovation in education. Wilson, along with two other schools, is to contribute innovative educational ideas to three BIA schools; the Indian schools are to help the public schools develop new curricula and further understanding as related to the Indians in America.

To implement some of the programs and philosophies, Wilson follows a system of window shopping regarding the selection of study areas. Students window shop as any adult might do in looking for the right set of clothes. There is a shopper's guide available to help him select, such as the ads one might find in the super market. If the student can't find what he wants, he asks the management to help him order a special program.

Tied in with all of the efforts is the development of the early childhood years. Wilson has limited three and four-year-old programs. But the five-year-olds are in school all day. We don't have a "mother hen" with them constantly; they wander throughout the building--six of the ten teachers are male. We are interested in freedom, responsibility, and self-selection for these youngsters, but with some structure based on diagnosis, prescription, and guidance.

Further, part of the Wilson program calls for options. Courses can be mini or maxi. Kids can go duck hunting whenever they want during the duck season, take vacations anytime during the year, work, sleep, stay at home, and generally "do their thing" as long as it doesn't hurt others. The opportunity of options is available to students K-12. We believe that humaneness involves choice of teachers, choice of courses, daily schedules, optional attendance, freedom of dress, and individualized evaluation (no report cards), as examples of some of the changes toward a humane school.

In this program, the year-round school concept is quite important. Students operate on a continuous progress, self-paced learning cycle; they may plug in, plug out, slow up, speed up, drop in, drop out, cycle in, cycle out whenever they desire. They may spend 3, 13, 33, 103 weeks pursuing an area. Wilson is open 12 months a year, closed only for two weeks during the winter, one week in the spring, and two weeks in the late summer.

Requirements at Wilson are quite fluid. We do not agree with the State Department requirements and, therefore, do not specifically follow them. We argue against college entrance required courses and disagree with the present legislative requirements. We do not believe that all ninth graders in Minnesota need English, social, math, science, physical education, and one elective; nor do we believe that all second graders need an extra big chunk of language arts, a big chunk of math, some social studies, minimum "book" science, and a little physical education, music, and art built around lunch and recess. What about home economics, industrial arts, foreign language, typing, environmental studies, and drama for elementary students. Wilson includes these and the instruction is on a 1-1 basis as much as possible. Groups are arranged when needed. The 1-1 and group arrangements are complemented by open lab and independent study opportunities.

The schedule is a daily smorgasbord menu. The student selects as much as is needed or is desirable, when it is needed, for as long as it is needed. Students select the amount of soup, salad, hamburger, cottage cheese, milk, cookies, steak, peas, eggs, baked potatoes, jello, etc., that seems desirable for that day. Putting it in educational terms, the student determines the amount of each course he desires to study in a given day. For example, he may spend all day in the art center. Each day a new schedule is developed for students to select the opportunitits which they desire to pursue. They may go home for part of the day, if that best suits their needs.

We are concerned about community involvement and the lighted school. We have Parent, Student, and Faculty Councils operating now, and coordinate them through a Joint Council. They are not as effective as we would like, but we are working to improve communication. We still have not done a good job tying the non-parent taxpayers, the legislature, the State Department and the School Boards into the school. Some parents are still not convinced. Usually the second year of an innovative program, there is a "revolt" from the minority who are against change. Wilson recently had theirs, and again it proved to be a very small but very vocal percentage. Schools interested in change must be willing to face this unpleasantness.

Wilson believes strongly in evaluation. There is more research to support a Wilson type program than the conventional, but there is not enough of either. We can't prove that Wilson is the right program, but neither is there proof that it is wrong. Conventional schools can't prove they are right, but Wilson can't prove they are as bad as we think they are. Wilson's evaluation is based on 1-1 relationships, diagnosis, prescription, affective domain, and student evaluations of teachers, plus outside evaluation by the Office of Institutional Research. Conventional schools have group comparisons, Iowa tests, "A" through "F" report cards, and emphasis on the cognitive, conformity, and authority. There is a great deal of research still needed in education.

To help a student through this type of program, each student selects a teacher who serves as his advisor, counselor, consultant. Each teacher has five to fifteen counselees; the teacher is involved in this selection process in that he or she agrees to work with the individuals who have made the requests. At Wilson, most all students have a great deal of 1-1 contact, whereas in a conventional school where there is one counselor for 300 students, there is very little 1-1 contact for most students. If it were attempted, there would be a long line outside the door each day.

Do schools really need to make such a dramatic change as that which has occurred at Wilson this past year? In the 1970's, communication systems will be available where through home TV and push-button phones we will receive instant answers from a regional retrieval information center. We will have an attachment to the TV sets to plug in home video cassettes so we can watch the Late, Late Show early, or any other favorite program or lesson we want to store on a cassette. The 1980's will find signed checks and credit cards on their way out. Elec[illegible]nic money is not far off. Should schools keep pace with the changes in their surroundings? We at Wilson believe we should. Not everyone agrees, but remember, Socrates was forced to commit suicide by drinking hemlock after he was accused of impiety and INNOVATION.

To implement such a program, teachers must be treated as professionals; they must be allowed to come and go and have optional attendance, freedom, responsibility, and a great degree of individualization and self-selection, the same that we preach for students. Teachers are human, too. This changes the whole authority structure--all present administrative designs must be revised.

Though each faculty member has gone through much frustration in the past year and a half, there have also been glimpses of the pot of gold at the end of the rainbow. Wilson teachers are convinced that there is somewhere, somehow, a better way to educate boys and girls; for this ray of hope they continue to strive. The efforts at implementing a humane school can probably best be summarized by a note received from one of the staff members during this past year. It read, "Don, I am staying home tomorrow. This day has been hell!"

Wilson's 14 points

faculty revised statements of school policy, march 1970

1. The most important element in the program is the teacher-pupil match--a child may choose any teacher (whenever possible) on the team in an attempt to find that match--we know that personality/perception/interest/sex/age of teachers make a difference; the students also need to realize that it is possible to choose a teacher other than the customary one formally assigned.

2. The affective domain is most important--self-image, success, attitude toward learning; the phychomotor is second--gross motor, fine motor, visual motor, auditory discrimination, etc. After both these areas are in good shape, the cognitive comes easily, if the curriculum is individually paced. Then all those areas should develop concurrently, working on any that fall behind at any time later.

3. There is no such thing as a grade level. Teachers must stop referring to 6th grade math or 2nd grade reading. Students should be referred to only as individuals or in temporary groups--the drug group, the transformational grammar class. In a nongraded continuous progress program, comparison of a student with another or with a fictitious group norm cannot be used to equate progress; these comparisons have validity only in individual diagnosis and prescription.

4. Each teacher must know each of his students thoroughly in relation to the student's progress in his area. Teachers in various teams must meet frequently to discuss students.

5. Each advisor is responsible for knowing each of his advisees in all areas--the affective, psychomotor, and cognitive--as related to all courses, involvement, and other phases of school life. Each advisor is responsible for checking the progress of each of his advisees every few weeks and for seeing that additional help is sought from counselors, psychologists, administrators, parents, other staff, and outside professional help if a student has a problem. We do not expect to be able to solve every problem, but the advisor is responsible for seeing that each advisee has a program aimed at overcoming his difficulty--realizing that the program may or may not be successful at that moment in time; continuous program review is necessary.

    a. Each teacher is to send each advisor a number of reports each year concerning the work of the student; the advisor is responsible for completing the yearly reports for each advisee and for cleaning out or catching up each file--following procedures recommended by the counseling team.

    b. Each advisor must communicate with the parents, following procedures set up by a faculty committee. In general, the parents should realize that if we do not contact them, the student is progressing: in the meantime, the parent may contact the school if he feels it is necessary.

6. Each learning situation is generally to operate in five phases--much 1-1, open lab, and independent study, with small and large groups as needed. There should be no problem of grouping; if some students want to meet in a group, or some teachers see value in a group, groups can be arranged.

7. The best curricula are usually student developed; but, if necessary, some portions of an individual student's program may be prescribed for him. Optional attendance is still the general policy; however, an individual student can be required to come to a particular learning situation if it has been agreed upon by the student, a group of teachers, parents, and advisor.

8. Allied curricular activities--such as dances, clubs, athletics--are considered a part of a student's learning activities, as well as a part of a teacher's contract. Plans for activities which take place outside the normal school day are to be approved by the associate director in charge of student activities. All students at Wilson shall be eligible for activities unless a faculty group has reason to prescribe exceptions.

9. The Student/Parent/Faculty Councils can submit requests directly to the Administrative Council if the request seems to affect only that group. Where the requests obviously affect another group as well, they must go through the Joint Council, by way of the associate director in charge of community services.

10. Students must be heavily involved in school development if the school is to be successful. Faculty are encouraged to encourage student participation--including younger students--in formulating school improvements and policies.

11. Faculty members must learn to function as team members, in practice as well as in theory. Four people working, teaching, and communicating together about a group of kids can do a better job than four individuals who refuse to work together--that is, to discuss curricula, student progress, and problems and reach a mutually beneficial solution. Student interns are members of this team. For example, there are not two industrial arts teachers, there are four--thus how can four help 200 kids, not how can two with some assistance help 200. This means student interns must make quality efforts.

12. There are "stop signs" at Wilson. Kids do not have complete freedom--there are restrictions. But those restrictions are similar to the few imposed when one has a driver's license--speed limits, stop signs,

road courtesies. Teachers should be no more restrictive than these few simple requests indicate; but they should be restrictive, as the policeman is, when there are violations.

13. Teachers need to be aware of media center/library facilities when building curricula, and to be aware that some students learn better through auditory and visual methods.

14. Wilson is a 12-month continuous progress school. Students should be able to plug in, plug out, speed up, slow down, start, stop courses at any time, and take as long as desired for the study.

the decision making process at Wilson

The administration at Wilson believes in a democratic, decentralized approach. We believe that those affected by the decision should be involved in developing that decision. We believe the line and staff idea ought to be flattened as much as possible, and that decisions should be made as close to the level of implementation as possible. However, we also believe that in the first years of change, a somewhat dictatorial democracy must exist, and that as long as ongoing change is to be the policy, some "dictatorial" decision will always be necessary. Hopefully the majority of decisions will be reached through the process described below. First, we need to explain this process as to how we want to make decisions as Wilson(1), then explain our present state of transition(2), and finally, explain why a type of dictatorial approach is necessary in the early stages(3).

1. Many decisions at Wilson are made by the student himself or by the student in consultation with a teacher. Additional decisions are made by teachers or by teaching teams. When the decision affects a broader number, the decision is recommended by the Student Advisory Council, the Faculty Advisory Council, or the Parent Advisory Council. These three councils can recommend directly to the administration; however, if the topic affects all three groups, the recommendation must first be approached through the Joint Council. The recommendations then come to the Administrative Council, a group of five non-teaching personnel, who recommend the final decision.

In addition, the decentralization philosophy involves final administrative decisions made by members of the Administrative Council as well as by the director: the coordinators of community services, person services, management services, and resource services all make final decisions in their areas of responsibility, though usually after consultation with other staff.

In the total structure of the college hierachy, the director still technically makes the final decision and can still override recommendations. However, hopefully almost all the decisions reached are from a concensus of the various advisory councils (Student, Faculty, Parent, Joint, Administrative) and, therefore, are actually made by the group involved, and not by the director. Only in rare cases should there be a veto; if the involved individuals or groups cannot reach a consensus, then the director in consulting with the Administrative Council will make the final decision.

2. At present Wilson is in a transition stage. All of the above mechanisms are now operating, but not all groups or individuals are as yet as heavily involved in the decision process as they could, should, or eventually will be for two reasons: (a) they are still learning how to make decisions and to accept responsibility for those decisions, (b) the director has purposely held on to some "power" for the time being, to make decisions to help speed the school over the troubled spots while attempting rapid change. In history we have examples of where the benevolent dictator concept has been the best method for a given country at a given moment in time. This does not mean the director of Wilson sees himself as a benevolent dictator, but there are times when speedy, decisive individual action prevents further difficulty and/or solves the immediate pending crisis. Then, too, there are times when an individual as well as the group must accept the responsibility of a decision.

3. There is a need for a "dictatorship" in the early months of innovation and change in current educational institutions. It has been found in educational studies that much of the 50-year time lag in adopting change has been due to the inability to convince the majority to try a new idea. Yet in almost every case the vote was taken out of ignorance. Example: do you want to operate this year without bells? The vote the first year is usually 80 per cent "no," 20 per cent "yes." But how does the staff make an intelligent decision without any experience with that realm. After a year of experience with the program, the vote is usually 80 per cent "yes," 20 per cent "no," assuming that the proposal was originally a good one. Thus, the director at Wilson made the decision to operate as a "dictator" the first year--"we will turn off the bells, we will not give ABC grades, we will have optional attendance, we will individualize instruction, etc."

The staff was asked to try these concepts; if they did not work, or needed modification, the staff would then be consulted. Gradually as an experience bank was established, more and more of the decisions would become those of the faculty. The director made all decisions at first; then the administration was decentralized. Soon new policies and modifications were recommended by the faculty design team; now the various advisory groups are beginning to formulate policy, programs, and decisions in all phases of the school. The eventual plan is for the director to ultimately become a "resident consultant," with most all of the decisions in the hands of individual associate directors, faculty, teams, student groups, and cross combinations of these various individuals and groups. However, as was indicated earlier, if the school is to remain a viable ongoing change school, elements of the "dictatorship" will always be found at Wilson.

Rapid, dramatic, change needs a dictatorial approach in the early stages, but to ensure ongoing innovations, the decision making authority ultimately must be delegated to a democratic procedure. In the meantime, the following statements illustrate the types of learning assumptions which currently form the basis for organizational decisions made at Wilson.

1. Learning is a problem of the total personality.
2. Learning is a problem of an individual's personal discovery of meaning.
3. To teach a person we must understand him. This is most easily accomplished by trying to see him and his world as he sees them.
4. EDUCATION MUST START WITH PROBLEMS OF LEARNERS THAT ARE IMPORTANT AND NEED-RELEVANT TO THEM.
5. Since needs, values, and attitudes are such important determiners of perception, education must seek to help students know what needs, values and attitudes are important to them and to consider these fully and in relation to each other.
6. Since personal perceptions are not readily changed through the introduction of objective evidence, education must begin with the beliefs of students and relate knowledge to their peculiar perceptions.
7. Perceptions are most readily changed through a reexamination of needs, values, attitudes and the possible meanings of previous experience.
8. Knowledge is but one determiner of human behavior.
9. Learners learn in response to their needs and perceptions, not those of their teachers.
10. EDUCATION MUST START WHERE THE CHILD IS AND PERMIT HIM TO DETERMINE HIS OWN DIRECTION AND PACE.
11. Not specific behavior but adequacy of perception and openness to experience should be the goals of education.

From: Learning More About Learning, ASCD, 1959

interrelating curricula and new curricular developments

Wilson has made a committment to interrelate curricula. Hopefully one day we will develop interrelationships around concepts, learning styles, skills, and ultimately then to the pinacle--the real needs and interests of each individual. However, we are not yet at that point, nor are curricular materials available to help at the moment.

Therefore, as a starting point, Wilson has moved from 15 AREA teams to 5 interrelated CENTER teams: the Expressive Center (old music, theater arts, physical education); the Communication Center (old English, special education and early childhood); the Creative Center (old art, industrial arts and home economics); the Environmental Center (old social studies, science, and environmental studies); and the Systems Center (old math and business). For support, there are the personnel of the school media center (old library and automation center); the Person Center (old counseling and guidance); and the Planning Center (old administration).

There were many other combinations of subjects discussed and many other titles considered. Some were actually preferred to the ones chosen, such as purposely mixing combinations of old "academic" and "non-academic" rated courses, but without going into all the pros and cons of each here, three criteria finally were applied to the decision: (1) physical location as neighbors (2) some common thread curricular interests (3) and the need to supervise the summer part of the 12 month program.

Certainly there is no magic to these divisions. Each center overlaps with others. But these are just a starting point. Further, the informal interrelationships already in existence such as theater history (team taught by social studies and theater arts) are continuing. Wilson hopes within the next year or two to make a complete breakthrough in curriculum.

Besides the efforts at interrelating, Wilson is trying to organize to better keep up to date on current national curricular developments. We know that we are far ahead of most schools, but still way behind in knowledge about all the new programs developed from 1968 to the present. Each month one reads of new systems or new materials coming on the market, or of older materials just now "catching on" in schools. Teachers continue to write their own to meet the demands for individualized, self-instructional aides. Tapes and loop films are growing monthly. Even better, students are creating their own curricula.

As was pointed out in the introduction to chapter 8, many of the projects listed there are now out of date, but they do illustrate the massive swell in curriculum development the past ten years.

For example, now coming on the market is IMS, Individualized Mathematical System (a revised IPI), produced by the Carolina/ Virginia Regional Educational Laboratory.

CEMREL is producing a new Learning Disability Program. Appalachian Educational Laboratory is producing a combination TV/mobile classroom program for preschoolers called "Around the Bend." Educational Development Laboratory has two exciting new social studies programs. A new bilingual education program has been developed by the Southwest Cooperative Educational Laboratory.

The new Dorsett Educational Systems "guaranteed performance" project is affecting teaching methods and curricula. New "society" curricula, minority studies, environmental studies materials, and many other areas are forcing change. New reading programs such as those developed by Random House and Psychotecknics, as well as a growing acceptance of ITA promise a further revolution in that subject. The American Industry project in Industrial Arts and simulation and gaming in all subjects challenge creativity.

New mini and mini-mini courses, developed by both commercial and federally funded projects, and even more exciting, those developed by individual and/or groups of students and teachers are causing another wave of thinking about course structure and requirements.

The point of all this discussion is to indicate that so many new materials are becoming available that one of the first tasks of a school trying to innovate is to develop an extensive listing of all the recent offerings, but remembering to carefully evaluate those on the list by a means similar to that suggested in Chapter 5 of this book. The next revision of this manuscript must contain a complete new listing of materials, changing schools, new books, and other 1970 innovations.

The scene is changing so rapidly that the forward looking school district has a "private eye" type curriculum person or similar team functions, whose sole responsibilities are to feed in answers, information, knowledge, and possible use of the developing curricula. Unfortunately, much of it still needs revision to use in an individualized program, but fortunately more and more of these types are now becoming available. The most promising factor in all this discussion is the great hope for real curriculum reform in the 70's.

daily smorgasbord scheduling

Wilson has received so many requests for a manual on how to build a daily schedule, that plans have been formalized to write an extensive 20-30 page step-by-step recipe. We had hoped to have it ready to include in this supplement, but running an ongoing, innovative school means that priority goes to constant change and improvements, and not to writing in detail each of the projects now operational. However, hopefully by the summer of 1970, readers could write to Wilson for a manual. The past three months have been a challenging but rewarding time at Wilson, for as stated earlier in this book, the first two years of rapid revision from a conventional system are really chaotic and frustrating, but most exciting. Thus we only have time here to outline the basic steps taken in the daily schedule construction.

1. Each teacher or teaching team and/or groups of students turn into the scheduling clerk each day before 9:00 A.M. the requests for the following day. These requests contain the groups of students desired, the amount of time, any special needs, the room desired, and any necessary comments. Sometimes teachers have no group request, so only a request for open studio, or open lab, or individual conferences, or closed, or some other comment is presented.

2. The scheduling clerk spends from 9:00-9:30 compiling an overview of schedule problems for that day.

3. At 9:30 the clerk is joined by three other adults (at least one or two teachers, a student teacher, an aide or other). These four spend from 9:30 to 11:00 putting the requests turned in from the teams on a master

schedule, which will become the program for the next day. Remember we schedule one day in advance. They build the menu in the following order.

a. special requests or hard to schedule needs
b. teacher conflicts and closed requests by teachers
c. younger children to make sure they are as conflict free as possible
d. scratch schedule of room requests already scheduled to check for conflicts
e. fill in other classes that have been requested
f. check final schedule for conflicts and accuracy
g. recopy and make a dittomaster on the thermofax and then ditto 60-75 copies
h. distribute 1 copy to each teacher's mail box and then post copies on certain walls around the school

4. In order to list all of the rooms in the school, four large sheets of paper are used which are then posted side by side on the walls or are clamped together for teachers. The four who form the scheduling team each have one of these four sheets to complete. For example, the Environmental Center rooms (science, social studies, environmental studies) are listed on one sheet side by side. This is true for all the centers.

5. Teachers are rotated on a staggered basis so that the scheduling clerk is always on the scheduling team and so that never do all three of the other schedulers go off at the same time. This provides for continuity as well as sharing the task of scheduling. It further is a good in-service training technique for teachers.

6. The schedule is posted for the following day by 2:00 p.m. of the previous day. That way teachers and students can, if they desire, check their plans for the next day before they go home.

7. For "1st grade" types of students, the counselor/advisor for each student helps the person make out an individual schedule. It is usually written down on a narrow schedule time sheet so that the student can carry it as a reminder of where to go, or can get help from an older student if lost. Older students who need some structuring also use these sheets. However, except for very young children, 98% of the Wilson students write nothing down but just check the schedule and go when the time arrives.

8. Most students have about 80% of their time scheduled as 1-1 conferences with teachers, open lab, or independent study. These do not have to be listed on the daily master schedule except that the times open labs and other are available must be listed. Students may then go whenever they desire and stay as long as they wish. About 20% of the time, the student is in small or large groups. These are scheduled as specific times.

9. There are occasionally conflicts in a student's schedule. However these are reduced by having each teacher turn in a conflict match of other courses which bother him most. For example, Band might list creative writing, Indian Cultures, chorus, yoga, and fencing as his biggest "enemies." The scheduling team tries to avoid scheduling these groups back to back.

Further, remember, all classes do not meet every day or for the same amount of time; generally only 20% of the students' day is in a structured group class. The rest is in unstructured small groups, individual work, or spur of the moment plans. Thus conflicts are further reduced.

Wilson has so many mini courses and mini-mini courses of 4-6 students that it is extremely difficult to keep track of all conflicts. In most cases conflict charts are not attempted with short mini-mini courses, but for a mini course which is going to extend over a stretched out period of time, conflict charts are kept.

There is a different philosophy about conflicts ar Wilson. The traditional school says it has no conflicts, but in the spring it establishes that French lV, Chorus, Band, Journalism (all singletons) will meet first period. A student must choose one of the four, but cannot take all four. At Wilson we think a student should take what he needs. Therefore we build in conflicts.

But the same conflicts do not occur everyday as we have a completely different schedule each day. Wilson is a 12 month school, open about 235 days each year — thus 235 brand new schedules are constructed, rather than the 1 built in a traditional school, or the 5 built in the flexible modular Stanford type arrangement.

If there is a conflict it is treated the same as if the student were sick. The student either misses the class entirely, or listens to a tape of the presentation or discussion, or meets with a teacher later, or meets with some of the students later, or could see a video tape of it if it were that important.

Remember, attendance is optional at Wilson so sometimes students would rather spend all day in the art studio and thus miss all the classes scheduled even if there is no conflict.

10. Students develop much of their own curricula. Thus many "classes" are scheduled by students and not by teachers; students working independently in a course avoid conflict by scheduling 1-1 conferences. Instruction is completely individualized at Wilson. Group meetings grow out of individual needs, so missing a "class" is not like missing a group paced program.

11. If readers wonder if this type of schedule can work without optional attendance, no report cards, choice of teachers, individualized instruction, team teaching, nongradedness, and all the rest, the answer is a big YES. There is a difference. At Wilson the current method is called daily smorgasbord scheduling. Under a more structured schedule, the name to use is "daily teacher controlled variable scheduling." For example, where 7th graders take the usual English, social, math, science, P.E., art, and H.E., the "groups" can be moved daily to each of these subjects as requested by the teahhers. The group may go 45 minutes to English, 75 minutes to art, 75 minutes to P.E., 60 minutes to math, and 30 minutes to social studies on a given day, skipping science and H.E. This type of scheduling is easier in many ways than Wilson's. Students are not

given as many choices and conflicts are not as common. In fact, this is how the first daily schedule of this type got started in 1963 at the Canyon del Oro school.

12. Another question always relates to size of school. Any size school can do this, but compromises must be made depending upon logistics, available manpower, student requirements, facilities, and other. In large schools, schools-within-a-school have proven to be the easier way.

13. Any age level can benefit from a daily schedule. Wilson has prek-12 students involved. The only difference is that there is more planning and structure for the 3's, 4's, 5's, and early 6's.

14. Cost is related only to the amount of paper and dittomasters used and for the man hours needed to build it. However, eight years of experience with daily schedules is convincing that the advantages far outweigh the disadvantages. Further, aid is around the corner via the computer. We now know how to build a daily smorgasbord with a computer and will switch to that system as the computer becomes available.

15. The teacher request sheets generally look like this.

Name or team ______________________

Date ______________________

COURSE	TIME	ROOM	SPECIAL NEEDS	REMARKS

L6. The final schedule generally looks like this.

	ENVIRONMENTAL CENTER									CREATIVE CENTER				
	10A	10B	11	11A	11B	12	13	14		15	16	17	17A	18
9:00	Open lab	Indian Cult	1-1 Conferences	Open lab	Open	Conserv	closed	animals						
9:15														
9:30					Chem		Ind study							
9:45		CWP				Z's								
10:00														
10:15														
10:30					Open			airplanes						
10:45														
Etc.														

17. Summary

Daily smorgasbord scheduling is an exciting, practical, effective, and far better way to schedule than the conventional methods. We at Wilson are willing to help schools undertake this major effort. Please contact the school if we can be of service. Scheduling itself is only a tool, but without getting rid of the old conventional organizations, real improvement is limited. Thus scheduling opens existing horizons for creative, innovative faculty and students. Though Wilson may modify its present scheduling techniques, it will never return to the old methods of scheduling. Remember, in the early 1800's, Peter Cooper's first railroad engine was beaten in a race by a horse. In the early 1900's, Billy Mitchell was court-martialed before the concept of airpower was accepted. Wilson believes daily scheduling is now in the Peter Cooper and Billy Mitchell stage, but one day it will be the space rocket. We hope other schools will help develop the philosophy and mechanics.

a physical climate for learning

by Gail Palmer, Wilson School, March 1970

(written after many recent consultant trips to conventional schools)

As one visits schools across the nation, as well as in other countries of the world, we find that the "Quincy Box" is still with us--the box designed in the 1840's when schools began sorting children according to age or grade instead of achievement. As the "box" evolved over the years, it came to have twenty-five to thirty students and a teacher. When one walked into the "box" there was an immediate feeling of formality. The desks were in neat, straight rows facing a front blackboard. The teacher's desk held a position of status by being in the center-front of the room. The walls of the "box" were a bilious green or an anemic tan sometimes brightened to a jaundiced yellow with a bit of umber or ochre. If the school were a twenty-eight room school, there were twenty-eight of these "boxes."

When school began each child was assigned a desk which was to be his for the year. He was to occupy this station hour after hour of the school day.

This sounds horrible, but realistically and unfortunately, the majority of schools have not departed much from the 1840 plan. To be sure the colors on the walls may have improved in some instances and a few schools have added a bit of carpeting. Some teachers have grouped desks in various patterns but each child still has his own. Most classrooms remain very ordinary and exceedingly dull. Little in the setting really "turns on" students and creates a desire to spend as much time as possible there.

What can be done to turn a very ordinary classroom into an exciting one? For most of the ideas presented the cost is minimal. The willingness to put forth some time and energy is essential. A bit of imagination and boldness is helpful.

Exciting colors on the walls add much to the atmosphere of a room. Why not a purple, a yellow, a green, and a blue wall or--some equally colorful combination?

Whether the wall colors can be changed or not, add a "jungle" of plants--real and/or artificial. A very natural-looking tree can be made by stripping a sapling of its leaves and putting in their place artificial foliage or fruit.

The "box" can easily be divided by moving tables and bookcarts out from the walls. A bit of fishnet attached from the ceiling and draped will also divide yet not obstruct the view of the rest of the room.

A "must" for the changed atmosphere is an area of the room which has a carpet. Attractive ones have been made by sewing or taping scrap carpeting together or by sewing carpet samples into an area rug. With this corner (preferably by a window) should be an ample supply of pillows. These the students can donate. Cover these with the brightest colors possible. Add a cage or two of birds, a couple of hassocks, a comfortable rocking chair and my! HOW THAT ROOM HAS CHANGED! How much more fun to do assignments propped up with pillows lying on one's stomach on the soft carpeted area. Add a background of restful recorded music and even the constructive noise disappears.

Encourage students to learn how to play Dominoes, Tic-Tac-Toe, Checkers, Chess, Cribbage, Monopoly. Tape a hopscotch board or two on the floor. A lot of "getting on" with others accompanies the skill building and socializing these activities provide.

By now at least one-third of the desks have been shoved into the hall on their journey to the basement. The remaining desks are left to be arranged and rearranged several times a day as various learning situations require. The soft corner and some table space should provide a work area for everyone. No student has "his own" space all day long. How much less boring this can make the day even in a self-contained clasroom.

Add a competent teacher who really cares about youngsters and the newly created atmosphere becomes vital and alive!

keeping up the bibliography

Here are a few more of the newer books to add to the bibliography previously developed for the original printing. These are not classified but just listed at random as they have come to the attention of the author. Schools in the midst of change must encourage awareness of and reading about the new trends in education.

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